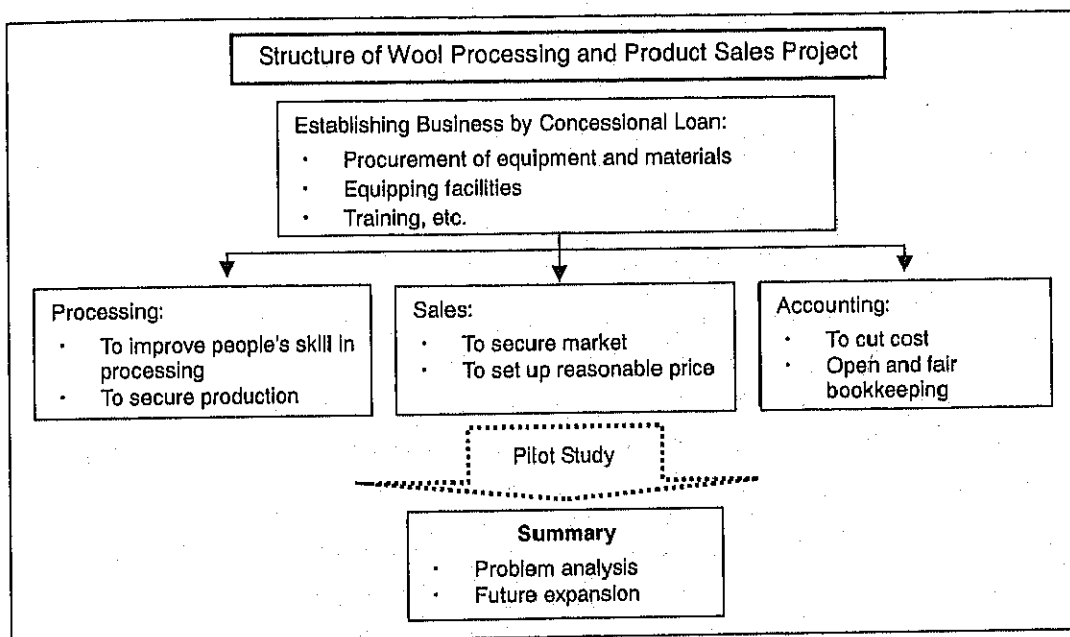


(2) Structure of the Project Implementation

Based on the basic policy of the project, structure of the project implementation is shown in the following figure.



(3) Content of Project

1) Selection of Pilot Project

The Study Team evaluated the possibility of implementing businesses within their technical level, profitability, markets and operation of the six proposals (*Ger* felt production: four groups, felt products production: two groups), and then selected the projects that will be implemented as Pilot Projects.

Table 4.6.34 Proposals Relating to Wool Processing

<i>Soum</i>	<i>Erdene</i>		<i>Ulaanbadrakh</i>			<i>Khuvsgul</i>
Group members	<i>O. Erdeneochir</i> and seven members	<i>R. Enkhtuya</i> and four members	<i>Munkhnasan</i> and eight members	<i>Bayantsagaan</i> and seven members	<i>O. Odonchimeg</i> and nine members	<i>Munkchimeg</i> and three members
Business concepts	Wool washing, <i>Ger</i> felt production (Raw wool 3 tons, three months operation)	Felt products processing (Slippers, Socks, Souvenirs, hats etc) (Raw wool 245 kg, seven months operation)	<i>Ger</i> felt production (Raw wool 1t, <i>Ger</i> felt 40 sheets)	Felt Products processing (Raw wool 194 kg, twelve months operation)	<i>Ger</i> felt, felt shoes production and hide processing	<i>Ger</i> felt and felt shoes production (Raw wool 5.5 tons, three months operation)
Solution in their proposals	To Build wool washing plant and manage it	To produce felt products by raw wool	To produce and sell wool processing products to increase their income	To build wool processing plant and buy raw wool from local herders with higher price	To increase selling price of raw wool. To produce and sell processed products with lower price	To produce processed wool products and sell them to domestic and international markets by buying raw wool from the <i>Soum</i>

As shown in Table 4.6.34, 4 groups submitted the proposals to produce *Ger* felt. This shows local herders are interested in producing *Ger* felt. The groups can produce *Ger* felt and felt products if they take proper technical training. However, since *Ger* felt is big and heavy and transportation cost is high, it is difficult to transport the *Ger* felt to remote areas, so that main customers would be local herders. Therefore, it is expected that the demand of the *Ger* felt would be limited. Also, in Mongolia, there is only one type of *Ger* felt processing machine that can produce large amount of *Ger* felt and is not suitable for small production. Because it was expected that the groups might compete with each other, it was decided that only one group (*Munkhchimeg's*) will implement production of *Ger* felt in these neighboring three *Soums*.

The three groups were selected in Wool Processing and Product sales Projects, they were *Munkhchimeg's* group in *Khuvsgul Soum* (for *Ger* felt and felt shoes production), *Enkhtuya's* group in *Erdene Soum* (for Felt products production), and *Bayantsagaan's* group in *Ulaanbadrakh Soum* (for Felt products production). Their detailed plans are described in the following sections.

Enkhtuya's Group:

Ms. *Enkhtuya*, the leader of this group, was a school principal and after retiring from the principal, she is now working at the *Soum* government and organizes vocational training for its people. She has never received technical training for wool processing that is planned as the Pilot Project. All group members lost their livestock due to the damage from *Dzud*, and are not currently unemployed. They belong to low-income families and live with their mothers' pension and unemployment benefits. The leader strongly hopes that members would acquire skills and be independent through implementing this Pilot Project

Ms. Bayantsagaan's Group:

Ms. *Bayantsagaan's* group produced hand-made felt products with comb machine and wool drying machine in October and November of 2003. The sales amount for these two months was Tg 301,500. The group plans to annually and efficiently produce and sell hand-made felt products after introducing two additional new machines in this Pilot Project. The leader is a veterinarian and owns a grocery store. She often goes on the business trip to each *Bag* and the neighboring *Soum* and has broadly developed networks. The members who had worked together to produce felt products last year formed this group and has strong bond among the members, and have already had definite skills for wool processing production.

Ms. Munkhchimeg's Group:

Ms. *Munkhchimeg's* group in *Khuvsgul Soum* plans to produce and sell *Ger* felt. The group hopes to provide stable raw wool market for local herders and sell the *Ger* felt with lower price than that from other places. Ms. *Munkhchimeg*, the leader of this group, now works at the *Soum* government as an agricultural officer after graduating from Agriculture University in *Ulaanbaatar*. She is now 23 years old and working very hard to develop agricultural businesses in the *Soum*.

2) Required Equipment and Price

To produce *Ger* felt, felt shoes and felt products, the following processes and equipment¹ are required.

¹ It was impossible to carry out phased input in the short Pilot Project period. Hence, all necessary machines and materials have to be procured at the same time.

Table 4.6.35 Required Equipment and Price Related to Wool Processing

Enkhtuya's group		Bayantsagaan's group		Munkhchimeg's group	
Equipment and machines costs	Amount	Equipment and machines costs	Amount	Equipment and machines costs	Amount
Scoring and separating hand-powered machine	300,000	Wool felting hand-powered machine	500,000	Scoring and separating machine	3,700,000
Wool felting hand-powered machine	500,000	Hand-powered spool machine	220,000	Wool felting machine	2,500,000
Hand-powered spool machine	220,000	Comb (2 pieces)	74,000	Dram	1,300,000
Comb (2 pieces)	185,000	Installation costs	150,000	Catal (Wool condenser)	850,000
Installation costs	150,000	Other costs	135,000	Moltcov (Wool compressor)	1,800,000
Redecoration costs of the workshop	500,000	Transportation costs	100,000	Stove	130,000
Other costs	279,000			Installation costs	700,000
Transportation costs	100,000			Redecoration costs of the workshop	2,000,000
Total	2,234,000	Total	1,179,000	Other equipment	354,000
				Transportation costs	556,000
				Total	13,890,000

3) Plan of Technical Support

The Study Team will provide technical training¹ to match the aimed product quality level and technical level for each group when the groups start this Pilot Project. It is expected for the groups to fully operate required machines and produce marketable products. The following are the plans of technical support for each group.

[Technical Training to Produce Felt Products]

No	The contents of the training	No	The contents of the training
1	General understanding about the wool • Types of the wool • Structure of the wool • Characteristics of the wool	5	Methods and technology of felt products • Classification of felt products and their demand • Felting properties of the wool • Equipment required for the felt products making • Characteristics of the different wool products and their making method -Slippers -Hats -Making small felt products -Mitten
2	Wool processing • Classification of the wool • Washing • Dehairing • Dyeing		
3	Traditional technology for felt making	6	Technology for felt boots production • Equipment to produce felt boots • Method to produce felt boots
4	Drawing pictures using the wool		

Note: This plan will be adjusted to the technical level of each group

[Installation and Training to Produce Ger Felt and Felt Shoes]

No.	Description	Term in days	No.	Description	Term in days
1	Assembly of felt producing equipment	1	5	Training on making felt boots	2
2	Installation of equipment	1	6	Training on making Ger felt	2
3	Making an adjustment to equipment operations	0.5	7	Checking for equipment operations and transferring it to recipient side	2
4	Assembly of electricity connections	1			

* - Assembly and installing of equipment was done by the Institute of research and development for light industry

¹ Study tours visited Ger felt factory in Altanshiree Soum and NGO in Ulaanbaatar. The experts from NGO (felt products) and the institute for light industry that produce Ger felt machine (Ger felt), made training in each Soum when equipment was installed.

4) Sales Plan

The following are plans of sales for each group. As for felt products, the group can sell them with: 1) retail to the customers, 2) wholesales to shops, 3) sales to shops by paying some margin under the contract.

Table 4.6.36 Sales Plan

	<i>Enkhtuya's group</i>	<i>Bayaantsagaan's group</i>	<i>Munkhchimeg's group</i>
sales in the first year	105 slippers (Tg 8,000/ a slipper)	132 felt shoes for children (Tg 3,500/a pair)	892m (178 sheets) of Ger felt (Tg 23,000/ sheet)
	105 socks (Tg 10,000tg/ a pair)	144 Buddhist bags (Tg 2,000/unit)	
	56 vests (Tg 6,500/a vest)	24 cushions (Tg 5,000/unit)	166 felt shoes (Tg 11,000/ a pair)
	105 souvenirs (Tg 2,500/ unit)	96 socks (Tg 1,500/ a pair)	
	105 hats (Tg 6,000/ unit)	108 slippers (Tg 5,000/ a pair)	
		156 souvenirs (Tg 2,000/ unit)	
		24 hats (Tg 2,000/ unit)	
	Tg 3,146,500	Tg 1,914,000	Tg 5,920,000
Operation period	From March to September (seven months)	Production and sales: annually	Production and sales: six months (from June to November), Additional sales: two months (in December and January)
Main market	Shop in the <i>Soum</i> <i>Burdene</i> sanatorium	<i>Bayaantsagaan's</i> grocery store Souvenir shop at a museum at <i>Ulaanbaatar</i>	Mainly herders in the <i>Soum</i> and also in neighboring <i>Soums</i>
	Camping area at <i>Tsagaan Khotol Bag</i>	Patients at a hospital in <i>Ulaanbaatar</i> , which friends hospitalize	
	People who live in the neighboring towns near the railroad stations		

5) Profitability of the Project

Based on the production and sales plan made by each group, the balance sheet of each group is assumed as follows:

Table 4.6.37 Balance Sheet of Each Group

	<i>Enkhtuya's group</i>			<i>Bayaantsagaan's group</i>			<i>Munkhchimeg's group</i>		
	Unit Price (Tg)	Quantity	Amount (Tg)	Unit Price(Tg)	Quantity	Amount (Tg)	Unit Price(Tg)	Quantity	Amount (Tg)
Raw wool		254kg	19,600		194kg	29,160		1,694kg	507,233
Lamb wool								1,997kg	(Total cost of materials)
Goat hair								249kg	
Cow and horse hair								1,052kg	
Salary	60,000	4 (1)	1,89,000	20,000	5	1,200,000	50,000	5 persons	1,600,000
Water	1	1,213 l	1,213	1	962 l	962	Transport.	20t	5,000
Electricity			39,900			68,400		3000kw/h	600,000
Other materials	1,000	254kg	254,000	1,000	194kg	194,000	detergent		22,000
Expendable							sheet and band, etc.		152,500
Sulfur (for felt shoes)							80g a pair		13,280
Transportation fee			100,000			50,000			254,788
Maintenance expenses		First year 1%			First year 1%			First year 1%	
Rent	20,000	12	240,000		none				120,000
Boil water			47,000			72,000			
Depreciation charge			377,173			210,933			526,567
Total cost			3,058,968			1,886,447			4,215,953
First year's income			3,146,500			1,914,000			5,920,000
Revenue			87,532			27,553			1,704,047

6) Participating Groups Share of the Project Cost

In order to make sure of their responsibility to independently manage their businesses, the groups need to shoulder the costs as much as the group can pay back. Shouldering costs for each group is divided into: i) initial working capital and ii) initial installation and equipment cost.

i) Initial Working Capital

The groups need to have initial working capital that includes the expense for raw material, other material and transportation expenses before its sales become stable. The following are the amount of the initial working capital for each group.

Table 4.6.38 Cost of the Start-up Working Capital of Each Group

	<i>Enkhtuya</i>	<i>Bayaantsaggan</i>	<i>Munkhchimeg</i>
Start-up Working Capital	Tg 60,000 in cash and raw material	Tg 100,000 in cash (accumulated profits from the last year's two month operation) and raw material	Tg 1,000,000 in cash and raw material

Munkhchimeg's initial working capital is high because the group needs to pay for raw materials, electricity fee, transportation fee, etc. before the demand increases (after October). To avoid cash shortage before October, the group needs to prepare enough working capital at the beginning.

ii) Payment for Initial Installation and Equipment Costs

In addition to the initial working capital, the groups will pay back 50% to 80% of the initial installation and equipment costs from the profits made by the conducted businesses. The payment portion of each group was decided by whether the groups can renew the machines with their own capital and loan from banks, while the group pays back the initial installation and equipment costs.

Table 4.6.39 Repayment Plans for Each Group

	<i>Enkhtuya</i>	<i>Bayaantsaggan</i>	<i>Munkhchimeg</i>
Repayment plans for the installation and equipment costs	The amount to repay: Tg 1,790,000 (80% of the initial installation and equipment costs) Repayment period: 5 years unredeemable for one year No Interest	The amount to repay: Tg 940,000 (80% of the initial installation and equipment costs) Repayment period: 5 years unredeemable for one year No Interest	The amount to repay: Tg 6,944,000 (50% of the initial installation and equipment costs) Repayment period: 7 years unredeemable for one year No Interest
Repaid fund	<i>Ulaan Uul</i> Fund	<i>Soum</i> Development Fund	<i>Soum</i> Development Fund

iii) Preparation of Agreement

The sales plan and repayment plan was discussed with each group's leader many times. Afterwards, Agreement (refer ANNEX M) to start the Project, with the repayment amount written in and its schedule attached, was signed with *Soum* governor, group leader and the Study team in each group.

7) Notable Points on Monitoring

The Study Team will monitor production and sales activities and profitability through activity records and interviews. The Team will check the results of the businesses, and will renew the plans if the results differ from the plans.

i) Production of the Wool Processing Products

The Study Team will monitor the following three points of the production activities through activity records and interviews:

- Sustainable and Planned Production Activities
- Quality Control by Improving Technical Level
- Products that Meet Customers Demands

ii) Sales of the Wool Processing Products

The Study Team will monitor the following four points concerning with sales through activity records and interviews:

- Sales based on the Plan
- Setting the proper prices
- Understanding the customers needs
- Impact from credit sales

iii) Profitability of the Businesses

After analyzing production and sales activity, the Study Team will evaluate whether the groups make profit, and assess the profitability of the businesses. Especially, the focus will be on whether the actual costs exceed the planned costs and if it will be required to reduce the costs.

iv) Payment to the *Soum* Development Fund and *Ulaan Uul* Fund

The Study Team will monitor whether the groups can pay back part of the initial installation and equipment costs to *Soum* Development Fund or *Ulaan Uul* Fund from their profits.

v) Cash Income of the Participating Members

The Study Team will monitor how the projects impact the group members, whether the cash earnings of the participating members increase, and how the group could distribute the profits to the members.

vi) Impact on the Neighboring Herders

The Study Team will monitor the amount of raw wool sold by the neighboring herders and their selling prices, and confirm the impact of the surrounding herders based on activity records and interviews.

(4) Results of the Project

1) Results in 2004

The wool processing projects started production after equipping the machines and taking training in July 2004. Every group did not make profit from the activity because cost reduction couldn't go with reduced production and sales compared with the estimated values.

Table 4.6.40 Present Situation of the Wool Processing Groups (December 2004)

	<i>Erdene group</i>	<i>Ulaanbadrakh group</i>	<i>Khuvsdul group</i>
Group members	Now, two members work on the activities and four persons left the group. (Reason: Illness, dust allergy, etc.) Since sales are not stabilized, the group is considering to increase part-time members.	Although the group operated by three persons at the beginning, one of them does not recently work due to her family problem, and another five original members quit the group. From the middle of October, four persons joined as new part-time members, and technical training was given them from existing members. They can produce only simple products now.	Now, five persons are involved in the project activities. All members on the initial proposal stayed except for the leader who quit the group before the manufacture started, and there was no member change after the project started. Since two members work as boiler men in winter, they cannot be engaged in the group activities.
Production	190 kg of wool raw materials was purchased from herders in the <i>Soum</i> , and the group processed 100 kg. 20 types of about 150 wool processing products were manufactured by November. Due to the decrease of the members, production was also slowdown. The group plans to manufacture products in winter while it reduces the number of output.	130 kg of wool raw materials was mainly supplied within the <i>Soum</i> , and the group processed 70 kg. The quality of local wool is bad and the group purchased some fine wool in <i>Ulaanbaatar</i> . Although it recognizes that fine wool acquisition is necessary to manufacture good products, the fine wool is very difficult to get. Even though the group received some orders in the <i>Soum</i> , since two main members are not full time, they cannot respond immediately. The group schedules to manufacture yearly.	2.5 tons of wool raw materials was purchased from herders in the <i>Soum</i> by Tg 320,000, and 1.3 tons was processed. Although machines had some troubles, the group fixed them. Electric supply hours are 3 hours from 20 to 23 pm. 43 <i>Ger</i> felts were manufactured. Manufacture of felt shoes will start next spring. The manufacture activities in this year stopped on October 3.
sales	The group sold only within the <i>Soum</i> till September. It expanded to the hotel and souvenir shop in <i>Sainshand</i> after October. The total sales revenue by November is about Tg 250,000. It now sells products at lower prices due to their low quality. The group aims at improvement design and quality of the products and raises the selling price gradually.	The group sells at the shop in the <i>Soum</i> and in the souvenir shops in <i>Sainshand</i> and <i>Ulaanbaatar</i> . The total sales amount by November is about Tg 270,000. Since the group cannot often obtain the information of the sales performance and check the inventories at shops in <i>Sainshand</i> or <i>Ulaanbaatar</i> , they sometimes have insufficient inventories. Although the group is eager to develop new products, much more skill improvement is required.	In the <i>Soum</i> and its neighboring <i>Soum</i> , all the manufactured <i>Ger</i> felts was sold out. The production did not fulfill demands even though the group received some orders. The total sales amount is Tg 1,030,000.

Table 4.6.41 Problems and Possible Solutions of Wool Processing Projects

Problems of wool processing projects	Solutions
1. <i>Erdene</i> and <i>Ulaanbadrakh</i> groups (Small wool products) 1) Sale channels were not established. 2) Spool machines were not utilized. 3) Group members decreased (Fewer productions). 4) Shortage of inventories in shops	1) The group started, in October, the commission sale (10% of sales are commissions) in a hotel of <i>Sainshand</i> which foreigners stay often. Moreover, in November, commission sales in souvenir shop and variety store in <i>Sainshand</i> also started. Each group continues to carry out negotiation for sales expansion with some shops. 2) The training by the technical instructor was conducted additionally in the late October and the member learned how to use the machine. 3) The groups hired (will hire) part time workers and ask them to work if necessary. The groups concern working environment. Since comb machine generates a lot of dust, they use the machine outside. 4) The groups will obtain the inventory information etc. periodically and try to deliver products timely. Moreover, the number of goods delivered at once will be increased.
2. <i>Khuvsgul</i> group (<i>Ger</i> felts) 1) As compared with a plan, electric cost was unusually high. 2) The machines for felt shoes were not used. 3) Although the demand of the <i>Ger</i> felt is high, production did not fulfill demand.	1) High electric cost occurred because of the wrong wiring of the meter. That was already repaired. 2) While the group was busy producing the <i>Ger</i> felts that was sold well, it was difficult to manufacture the felt shoes. The group will manufacture felt shoes from next spring. 3) The group will pursue the efficient production within the limited electric supply hours. The role of each member will be clearly defined.

2) Results in 2005

Since commencement of the project in July 2004, a difference between the planned values and actual data collected during about one year has become larger.

i) *Enkhtuya's* group

【Comparison between Initial Plan and Past Result】

Initial plan and past result of *Enkhtuya's* group is shown into Tables 4.6.40 to 4.6.42.

Table 4.6.42 Comparison between Results and Initial Plan (Annual)

Products	Number Produced			Sales Results	Sales Revenue (Tg)		
	Sales Results	Sales Plan	Achievement (%)		Sales Results	Sales Plan	Achievement (%)
Slipper	37	105	(35.1)	17	75,857	840,000	(9.0)
Socks	27	105	(25.3)	27	52,714	1,050,000	(5.0)
Vest	3	56	(4.6)	3	11,571	364,000	(3.2)
Souvenir	30	105	(28.6)	16	8,829	262,500	(3.4)
Hat	3	105	(2.4)	1	4,286	630,000	(0.7)
Mat	9			0			
Bag for Buddhist	2			1	1,286		
Insole	14			11	4,543		
Child's boots	25			15	35,143		
Belt	9			9	37,714		
Blanket	1			0			
glove	9			3	6,000		
Coaster	3			3	1,800		
Total	170	476	(35.7)	106	239,743	3,146,500	(7.6)

Note: Data is based on the results until August 2005

Production and sales revenue of the group fell below the initial plan. Production achieved only 36% of the plan. What is worse, sale revenue achieved only 7% of the target. Lots of products are overstocked.

Costs of each item are lower than the plan except water cost. In terms of ratio to the plan, raw material is larger than production. Salary is much lower than the initial plan.

Sales Revenue	239,743
Cost	316,633
Profit	-83,747

Note: Data is based on the results until August 2005

【The Reason of the Difference and Countermeasures】

➤ Production

The reason why the production fell below the plan simply due to labor shortage. In addition to that, too few persons are producing too many kind of products.

Table 4.6.44 Cost Comparison between Results and Plan (Annual)

Item	Results	Plan	Achievement (%)
Raw Material	156,120	264,600	(59.0)
Salary	118,157	1,890,000	(6.3)
Water	4,114	1,213	(339.3)
Electric Power	699	39,900	(1.8)
Miscellaneous	37,543	147,000	(25.5)
Repair	0	22,340	(0.0)
Total	316,633	2,027,188	(15.6)

Note: Data is based on the results until August 2005

➤ Sales and Sales Revenue

There are two reasons why production didn't increase sales and sales revenue. One is a seasonal issue and it will be solved in the coming winter (refer to Fig. 4.6.19). Another issue is that design, quality, and price of product do not match the demand.

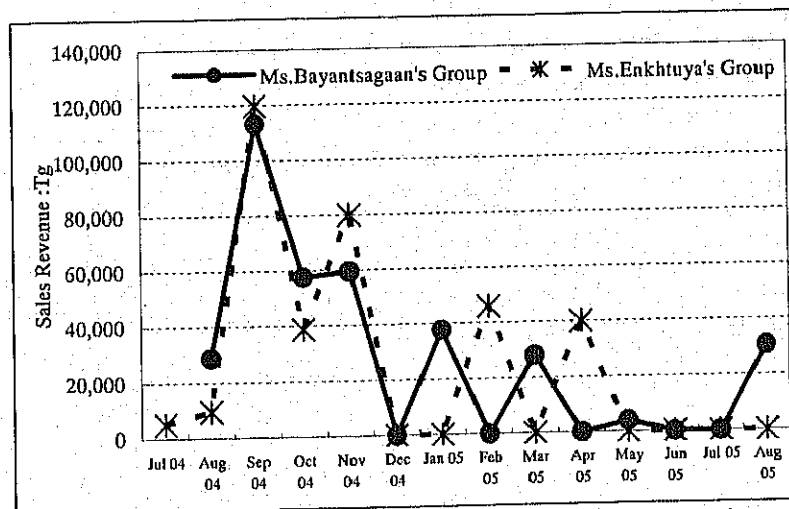


Fig. 4.6.19 Monthly Sales of the Wool Processing Products - Comparison Ms. Bayantsagaan's and Ms. Enkhtuya's Group -

➤ Cost

As for the cost, the salary is lower compared with the initial plan. This is due to application of payments by results as a result of large decrease of workers.

Increase of raw material cost arose from wool quality. Wool produced at the *Soum* is very hard and its quality is inferior. This caused two problems. The first problem is that customers evaluated the products quality as lower especially in *Ulaanbaatar*

because product's quality is mostly determined by wool quality. So the group will purchase high quality processed wool in *Ulaanbaatar*. But its cost is much higher than that of local wool. The second problem is that wool wraps around a shaft of the primary processing machine. Therefore, the group purchases short wool sheared at autumn. It costs Tg 500/kg.

【Countermeasures】

➤ To Strengthen its Production and Recruit New Members

Although payment method makes it difficult to recruit workers, Ms *Enkhtuya* herself intends to add two workers as soon as possible.

➤ To Expand Market

The group is still now positively expanding markets. At the present, their market is *Soum* center, museum in *Shainshand*, market in *Ulaanbaatar*. At the museum they sell the products on consignment. From year 2005 they want to open channels to *Zamiin Uud* which is a land port city located near border to China, and *Tsagaankhad* where there is a station where international trains stop.

Table 4.6.45 Sales by Location
(until Aug,2005)

Market Place	Sales (Tg)	%
<i>Soum</i>	176,700	(63.2)
<i>Sainshand</i>	36,000	(12.9)
Other	67,000	(24.0)
Total	279,700	(100.0)

Note: Calculation based on the data until Aug,2005.

➤ Catching the Customers Needs

The group members are devoted to research, so they often go to other wool processing groups for inspection, and then they reflect their learning to production. In addition they started to do market research in the *Soum* and developed new products.

➤ Pricing

The group calculated unit costs and set price for each product by collecting data during the first year, and the price of the most products were managed well, but there were some improper prices among them.

➤ Production and Sales Plan Matched for Seasonal Demand

The group pointed out that works in winter at their factory has expensive fuel costs. Therefore, the group decided that in winter, they work in the house of each person for saving factory's fuel expense.

➤ Improvement of Activity Record

The group is recording their production and sales activities. However there are unclear for a third person. Therefore, successive improvement for bookkeeping using consistent names of products and cost was conducted by the Study Team.

ii) *Bayantsgaan's* Group

【Comparison Between Initial Plan and Past Result】

Initial plan and past result of *Bayantsgaan's* group is shown in Tables 4.6.46 to 4.6.47

Table 4.6.46 Comparison between Results and Initial Plan (Annual)

products	Number Produced			Sales Results	Sales (Tg)		
	Sales Results	Sales Plan	Achievement (%)		Sales Results	Sales Plan	Achievement (%)
Felt Shoes for	44	132	(33.1)	17	37,286	462,000	(8.1)
Bag for Buddhist	27	144	(18.5)	3	14,571	288,000	(5.1)
Cushion	0	24	(0.0)	0	0	120,000	(0.0)
Socks	20	96	(20.5)	13	18,686	144,000	(13.0)
Slipper	64	108	(59.5)	23	97,714	540,000	(18.1)
Souvenir	54	156	(34.6)	1	1,714	312,000	(0.5)
Hat	0	24		0	0	48,000	
Insole	177	0		62	33,900	0	
Mat	12	0		3	8,143	0	
Coaster	11	0		0	0	0	
Bag(Big)	24	0		4	0	0	
Glove	2	0		0	0	0	
Picture	27	0		23	96,171	0	
Total	460	684	(78.5)	149	308,186	1,914,00	(16.1)

Note: Data is based on the results until August 2005.

The group produced 460 items per year, which is equivalent to 80% of the initial plan. However sales revenue is far below the plan, only 18 % of the plan.

Cost is relatively well managed. Sales revenue is 16% of the plan, and actual cost is 21%, which is similar.

Balance in 2005 turned to deficit from a little surplus recorded in the previous evaluation. The group has much stock. The demand of wool products except some souvenirs will increase in the coming winter.

【Factors causing the Difference and Solutions】

➤ Production

Among the installed machine, wool felting hand-powered machine is not used today because its chain was broken. However Ms. *Enkhtuya's* group uses the same machine by exercising ingenuity. The Study Team requested the group to repair and use it promptly by showing Mr. *Enkhtuya's* case.

➤ Sales & Sales Revenue

As for items which have poor sales, its reason should be analyzed, and items should be also narrowed down, if reform is difficult. Since present price seems to be a little expensive, proper price should be sought out.

Table 4.6.47 Balance (Tg)

Sales Revenue	308,186
Cost	338,640
Profit	-30,454

Note: Data is based on the results until August 2005.

➤ Cost

Cost management is at a reasonable level. However, the group leader works without salary, and leader's house is used for their factory. The factor of cost is relatively well managed in the payment system for salary is paid per job.

On the other hand, in comparison with sales revenue, expense of raw material is relatively high. This reason is the fact that they keep lots of unsold stock and very expensive wool (Tg 8,000/kg) purchased in *Ulaanbaatar*

【Countermeasures】

Problems presented in previous evaluation and possible solutions are as follows.

➤ To Strengthen the Production Activity

Since some members were reshuffled in the previous evaluation, the group was recommended to early upgrade the skills of the new members. Since then, there have not been any new members. Stability of the members is pretty good, and Group's skill has improved totally.

➤ To Expand Sales

Sales channels increased by one to five in 2005, included *Soum* center. However, it hasn't contributed to increase sales. They should continue seeking more sales channel.

Table 4.6.48 Sales Results by Sales Place (Tg)

<i>Ulaanbaatar</i>	78,500	(25.4)
<i>Soum</i> center	135,200	(43.8)
Shandplaza Hotel	62,950	(20.4)
Others	32,200	(10.4)
Total	308,850	(100.0)

Note: () shows portion.

➤ To Check the Inventories and Obtain Useful Information from Shops

Stock in the shops of *Sainshand* is checked only one time every one or two months. The member who lives at *Sainshand* and the leader's sister who works at museum should continuously check stock.

➤ To Grasp the Customers Needs

The following customers needs shall be also collected: i) Who buys and which products, ii) Quality and design that customers demand, iii) best or better sellers of products, and iv) fair and reasonable price between customers and the group

➤ To Record the Group Activities and Bookkeeping

Group activity record and accounting are hardly recorded, thus, i) the group should constantly use the consistent production, cost and sales items, ii) they should write it down immediately to prevent any omission, iii) they should manage one book without recording the same thing in many books.

iii) *Munckhimeg's* Group

【Comparison between Initial Plan and Past Result】

Initial plan and past result of *Munckhimeg's* group are shown in Tables 4.6.49 to 4.6.50.

Table 4.6.49 Comparison between Results and Initial Plan (Annual)

Products	Number Produced			Sales Results	Sale on credit	Sales Revenue: Tg		
	Sales Results	Sales Plan	Achievement(%)			Sales Results	Sales Plan	Achievement(%)
<i>Ger</i> Felt	52	178	(29.3)	46	16	1,155,857	4,094,000	(28.2)
Felt Boots	5	166	(3.0)	5	0	20,000	1,826,000	(1.1)
Total						1,175,857	5,920,000	(19.9)

Note: Calculation based on the data until Aug,2005.

The group has never been able to make sufficient production and sales revenue. They produced only 29% of *Ger* felt in the plan and 3% of felt shoes. Sales revenue was Tg 1,155,857 for *Ger* felt and Tg 20,000 for felt boots, which was equivalent to 28% and 1% in the plan, respectively. The group has 19 sheets of sales on credit. Including these sales, sales revenue will be Tg 1,603,857, which is equivalent to 39% of the plan. Felt boots production was only 5 pairs because they gave priority to *Ger* felt production.

【Factors causing the Difference and Solutions】

➤ Production

Difference between initial plan and past result is caused by several factors. First of all the electric power condition at *Khuvsgul Soum* was changed since last year. The electricity of *Soum* was supplied 7 days per week last year, but it changed to 5 days per week for this year. They had produced 16 *Ger* felts per month at the maximum last year; now they can produce only 11 per month in maximum.

Ger production was also affected by other factors. Wool purchased wraps around the machine shaft. Therefore, it is necessary to clean up every several hours and their machines cannot be operated effectively for 3 hours.

The other factors are as follows: i) The group doesn't have vehicle to go buying wool, so wool purchasing depends on the headers; ii) All members are engaged in the project as a second job; iii) Their factory is forced to stop because of the mechanical or facility problem, etc.

However, for wool purchasing, they developed a business model that the group processes the *Ger* felt by charging only a processing fee for the headers who offer raw wool. Now a large part of *Ger* felt is produced by this order-based production model.

➤ Cost

Expense of raw materials and salary affect the cost greatly. Wool was procured for Tg

150/kg on the average, Tg 200/kg at maximum last year. However, wool price rose to Tg 300/kg on average this year. Although raising wool price is good for headers, on the other hand, it becomes major threat for the wool processing project.

Although salary is based on the minimum salary, a fixed salary is unfavorable for the present management. Therefore, it is necessary for the group members to have a discussion among themselves, to change the current salary system to one responding to the production even though the leader serves without pay.

Table 4 6.50 Cost Comparison between Results and Plan (Annual)

Item	Results	Plan	Achievement (%)
Raw Material	338,593	529,233	(64.0)
Salary	1,011,429	1,600,000	(63.2)
Water	13,886	5,000	(277.7)
Electric Power	39,771	600,000	(6.6)
Miscellaneous	43,929	520,568	(8.4)
Rent	0	120,000	(0.0)
Maintenance	9,257	138,900	(6.7)
Total	1,456,864	3,513,701	(41.5)

Note: Calculation based on the data until Aug,2005.

➤ Sales and Sales Revenue

Strength of the group is that they can sell all products, if it is at current prices. Therefore, sales and sales revenue are determined by production and cost, when the price is given.

Sales price is currently Tg 28,000 per sheet. If the price is kept at this level, customers come to buy from not only surrounding *Soums*, but also far away places such as *Zamiin Uud*. As for price, it will be possible to be raised because the raw material price has risen since last year.

【Countermeasures】

Problems presented in the previous evaluation and countermeasures are as follows:

➤ To Improve Production Efficiency

Efficiency must be improved because they have had experience for a whole year. They decided to produce 13 sheets per month as a consensus of the group.

➤ Reforming Salary System

Salary is to be changed to the system that is production-based.

➤ Acquiring the Knowledge of Accounting

Acquiring the knowledge about bookkeeping was done through the work of reviewing the repayment plan to the *Soum* Development Fund, in which the members themselves calculated this year's balance sheet and formulated the plan for next year. The leader comprehends almost all the group financial data, and it will be required to continue proper bookkeeping..

➤ Production of Felt Shoes

First of all, securing sales is top priority rather than expansion of the sales and production of the felt shoes, so it is important to invest management resources intensively into *Ger* felt production which has high demand.

iv) Review of Repayment Plan to *Soum* Development Fund

【*Enkhtuya's* Group】

Table 4.6.51 shows the repayment plan which was formulated through Workshop by the group itself.

Table 4.6.51 Review of Repayment Plan - Ms. *Enkhtuya's* Group -

Expenses	Per Year (Tg)		Income	Per Year (Tg)	
	Original Plan	Revised Plan		Original Plan	Revised Plan
Raw material	264,600	192,000	Children's Shoes		200,000 (100)
Salary	1,890,000	787,000	Saddle-cloth		240,000 (40)
Water	1,213	10,000	Belt		105,000 (30)
Electricity	39,900	56,000	Vest	364,000 (56)	210,000 (30)
Other material	100,000	50,000	Slipper for Adult	840,000 (105)	450,000 (100)
Rent	240,000	200,000	Children's Slipper		250,000 (100)
Redecoration	22,340	25,000	Souvenir	262,500 (105)	100,000 (50)
Fuel	47,000	100,000	Sock (Felt)		250,000 (50)
Repayment to <i>Soum</i>	358,400	309,300	Sock (Wool)	1,050,000 (105)	
Total	2,963,453	1,729,300	Hat	630,000 (105)	
			Total	3,146,500 (476)	1,805,000 (500)

Profit	Per Year (Tg)	
	Original Plan	Revised Plan
	183,047	75,700

Note:

- 1) Parenthetical figure of "Income" shows the estimated production number.
- 2) Corporate tax is 10% of profit and included in the profit

Review of the repayment is summarized as follows:

- To tentatively stop knitting wool products and concentrate it on felt products.
 - To concentrate production on felt products until the management becomes financially stable after the next year.
 - To narrow down production to 8 items which are based on the sales results in the past. Thereby skill will be based on familiar items and productivity also increased.
 - Not to change payment rules because it reduces motivation.
 - It is necessary to secure workers early on because too few workers critically worsens revenues.
 - Repayment method can be reviewed by implementing the above mentioned points.
- The group is renting a work room from *Soum* government and being charged Tg 500,000 for its facilities. In addition, the group is requested to pay rent for the workroom. *Soum* government highly appraises the activities of the group, and intends to give some kind of support. For this purpose, *Soum* government proposed a plan to exempt the facilities cost from repayment to the *Soum* development Fund.

- Consequently, revised amount of repayment should be Tg 1,387,200 which takes facilities cost from original repayment, and this amount should be repaid in the following manner: Tg 150,000 in the first year, and Tg309,300 from second year to fifth year, as an even repayment schedule (Table 4.6.52).

Table 4.6.52 Annual Repayment (Tg)

1st year	150,000
2nd year	309,300
3rd year	309,300
4th year	309,300
5th year	309,300
Total	1,387,200

【Bayantsagaan's Group】

Table 4.6.53 shows the annual repayment plan in the future, which was reviewed by the group itself through the workshop. The revised repayment plan of the group explained the following five points:

Table 4.6.53 Review of Repayment Plan – Ms. Bayantsagaan's Group -

Expenses	Per Year (Tg)		Income	Per Year (Tg)	
	Original Plan	Revised Plan		Original Plan	Revised Plan
Raw material	223,560	52,000	Souvenir	312,000 (156)	
Salary	1,200,000	558,450	Sock	144,000 (96)	300,000 (60)
Water	962	12,000	Bag (for Buddhist)	288,000 (144)	
Electricity	68,400	34,800	Insole		140,000 (140)
Other material	122,000	100,400	Mat		360,000 (30)
Redecoration	11,790	20,000	Slipper	540,000 (108)	250,000 (50)
Repayment to	188,000	94,320	Scarf		180,000 (30)
Total	1,814,712	871,970	Children's Shoes	462,000 (132)	
Profit	Per Year (Tg)		Cushion	120,000 (24)	
	Original Plan	Revised Plan	Hat	48,000 (24)	
	99,288	358,030	Total	1,914,000 (684)	1,230,000 (310)

Note:1) Parenthetical figure of "Income" shows the estimated production. 2) Corporate tax is 10% of profit and included in the profit.

- To narrow down production into the items where sales had favorable results.
- Very expensive and high quality wool procured in *Ulaanbaatar* is one of the factors to get profit. Since quality of wool is not important when the customer in *Soum* buys it, purchase of wool in *Ulaanbaatar* should be controlled to the minimum.
- Not to change current payment system.
- Miscellaneous expenses should be reviewed and then reduced.
- After taking measures on the above mentioned points, period of the repayment to *Soum* Fund should be extended from 5 years to 10 years, and then annual amount to repay should be reduced from Tg 188,640 to Tg 94,320. Total amount to repay is unchanged.

Durability of the equipment installed in the group is 5 to 7 years. Ten years is a little longer than its durability; however, durability of 10 years seems to be appropriate, in consideration of specific condition that all members have their own core business and they engage in their group work only for several hours after their regular work.

[Munckhimeg's Group]

Table 4.6.54 shows the annual repayment plan in the future, which was reviewed by the group itself through the workshop.

Table 4.6.54 Review of Repayment Plan

Expenses	Per Year (Tg)		Income	Per Year (Tg)			
	Original Plan	Revised Plan		Original Plan		Revised Plan	
Raw material	529,233	585,000	<i>Ger felt</i>	4,094,000	(178)	1,852,500	(65)
Salary	1,600,000	650,000	Felt shoes	1,826,000	(66)		
Water	5,000	48,750	Total	5,920,000	(244)	1,852,500	(65)
Electricity	600,000	90,000	Profit	Per Year (Tg)			
Other materials	520,568	20,000		Original Plan	Original Plan		
Rent	120,000	0		1,414,156	53,750		
Redecoration	138,900	55,000	Note: 1) Parenthetical figure of "Income" shows the estimated production.				
Repayment to <i>Soum</i>	992,000	350,000	2) Corporate tax is 10% of profit and included in the profit.				
Total	4,505,701	1,798,750					

Points of the review are summarized as follows:

- To increase *Ger felt* production from 10 sheets per month to 13 sheets per month.
- To slightly raise current price from Tg 28,000 per sheet to Tg 28,500 per sheet.
- To pay salary corresponding to production.
- In consideration of poor balance sheet performance, electricity expense will be reduced to Tg 18,000 per month by the *Soum*.
- Production of the felt shoes shall be put on hold, and production shall be concentrated on *Ger felt* which is in demand.
- If the above-mentioned five points could be carried out, it will be possible to repay Tg 70,000 per month. Operation period of the factory is five months from May to September, so amount of Tg 350,000 will be repaid annually.
- If external factor such as electric power condition were improved, the repayment period could be cut down in consideration with *Soum* government.

The period of revised repayment plan is 20 years. Durability of the equipment installed in the group is 10 to 15 years. Although its period of 20 years is longer than its durability, however, durability of 20 years is concluded to be appropriate, in consideration of specific condition that operation time is only 3 hours per day due to *Soum* electricity condition and the factory is closed during the freezing period from October to April.

4.6.6 TRADITIONAL WELL CAMPAIGN PROJECT

(1) Objectives and Basic Policy of the Project

At present, construction of the Traditional Wells, which has comparatively low operation and maintenance cost and is a very important water source to supply water for herders livestock, is not progressing, and it must be solved to maintain the current livestock farming system. The reasons why its construction is not progressing is thought to be as follows.

- The herders do not have a keen interest in constructing Traditional Wells.
- The herders can't construct Traditional Wells.
- Technology of constructing Traditional Well is insufficient among herders.
- Risk of constructing Traditional Well is high.
- Procurement of construction materials is difficult in rural areas.
- Construction materials are insufficient in rural areas.
- Procurement of labor is difficult.
- No stakeholders except the herders have interest in the Traditional Well.

This project will be implemented to improve conditions so that Traditional Well construction is promoted by giving "*Soum* government the capacity for Traditional Well construction". Activity necessary to achieve this purpose is as follows:

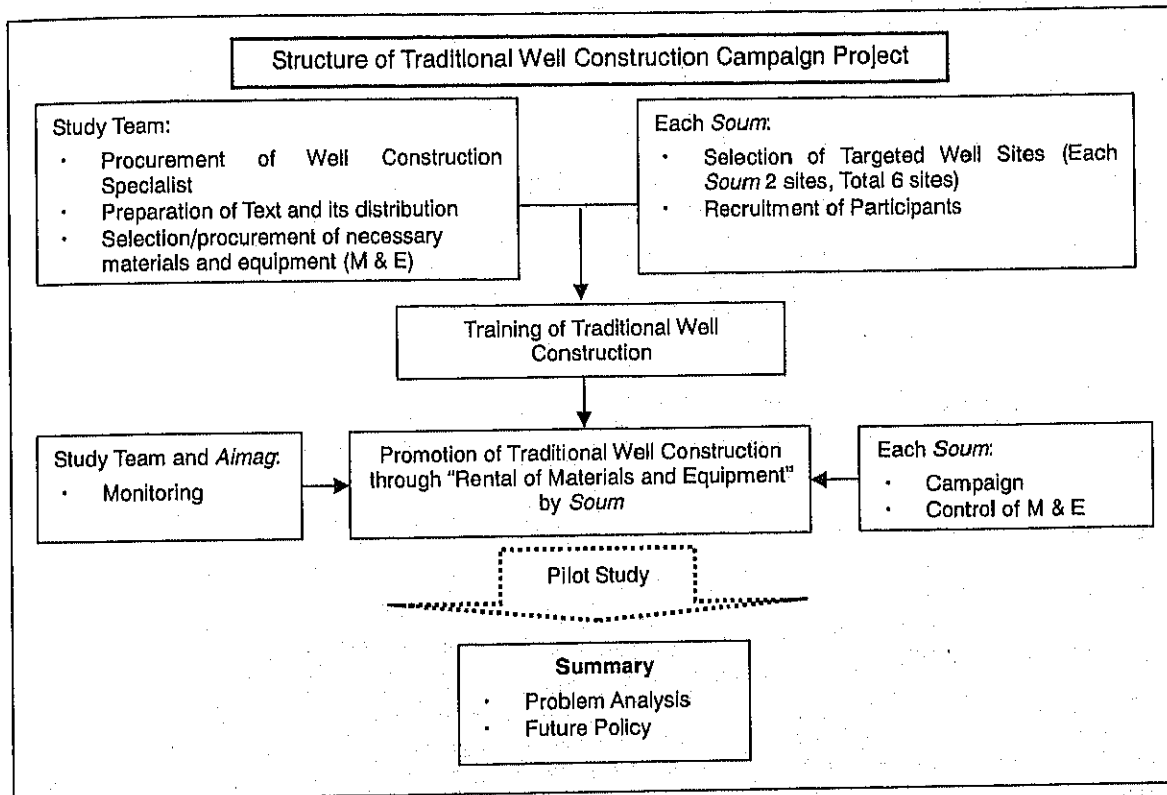
- Training on the Traditional Well construction through the campaign (2 wells in each *Soum*)
- Offering necessary materials to each *Soum* government (see Table 4.6.57)
- Development *Soum's* managing capacity of material stocks (of well construction, material stocks and loaned money).
- Conducting training on pasture management to increase effect of the Traditional Well construction
- Actual Traditional Well construction by the herders

(2) Structure of the Project

Although this project is implemented by the *Soum* government, at the preparative stage of the project, the Team supports the *Soum* government in procurement of specialist to teach herders Traditional Well construction, use of materials and equipment necessary for the construction, and in preparation of a text (ANNEX L) for Traditional Well construction.

Soum government will select the herders to participate in the Traditional Well construction training when the campaign begins, and study and try to expand the technology to the herders in the *Soum* through participating in this training. Furthermore, *Soum* government will manage the equipment and materials of the Traditional Well, lend them to the herders, and collect a rental fee. At the same time, it will advertise to promote the use of these equipment. Since only two sets of well materials will be introduced in the Project, they will disappear at the initial stage of the campaign. Therefore, it will be required that *Soum*

government procures additional materials to continue the campaign in the future, and to promote activity to support the Traditional Well construction by the herders. *Aimag* administration will monitor these activities with the Study Team.



(3) Contents of Project

1) Current Situation of Traditional Well Construction

The present condition of the Traditional Well in three Pilot Study *Soums* differs widely from each other as shown below. Since *Soum* government has no budget to support Traditional Well construction activity for the moment, Traditional Well has been constructed on the herders' own initiative.

Table 4.6.55 Information on Traditional Well Construction in 3 *Soums*

		<i>Erdene</i>	<i>Ulaanbadrakh</i>	<i>Khuvsgul</i>
Soum government's recognition on the present condition of Traditional Well		As Traditional Well is insufficient at present, it is necessary to repair and rehabilitate the existing Traditional Wells, and then improve the current situation. It is also important to construct new wells at the necessary points.	It is recognized that there are enough Traditional Wells in the whole <i>Soum</i> . However, it is worried about that groundwater level has been falling in recent years.	Capacity of the Traditional Well in <i>Soum</i> is small, so it doesn't respond to demand of the herders. But, since livestock number reduced by <i>Dzud</i> , the herders think that they can survive with the present condition.
Result of Geophysical survey by Ministry of Food and Agriculture		Out of 50 points investigated in 2002, water resource was confirmed at 16 points, and 10 points of them were water source used for the Traditional Well.	Out of 60 points investigated, water resource was confirmed at 16 points. However, the entire water source was deeper than 5 m.	Out of 58 points investigated in 2002, water resource was confirmed at 18 points. However, the entire water source was deeper than 5m, and 5 points were shallower than 10m.
Construction Record	2000	3 wells. 1 well was rehabilitated by <i>Soum's</i> finance.	None	2 wells.
	2001	1 well.	8 wells. Traditional Well contest: 3 rd place in the whole country (<i>Sangindalai Bag</i>).	2 wells.
	2002	1 well.	2 wells	3 wells.
	2003	4 wells. 2 wells among them were confirmed by the geophysical survey.	None	4 wells.
Labor offer		Herders group	Herders group	Support besides the herders group should be considered.
Measure that <i>Soum</i> government took to promote Traditional Well construction.		<i>Soum</i> government has no budget to finance for well development.	To compensate lack of labor, <i>Soum</i> government makes the jobless participated in Traditional Well construction as a relief worker, and pays them for its value. The younger exempted from military service are forced to work for the well works as a social service activity.	To compensate lack of labor, the younger exempted from military service are forced to participate in the works of Traditional Well as a social service activity. There is no finance from <i>Soum</i> government.
The biggest issue on Traditional Well construction which the <i>Soum</i> recognizes.		Lack of labor, fund, strong will of the herders themselves, and equipment such as drain pump.	Uncertainty about expected well capacity and well depth in advance.	The herders can't confirm water source. Though the herders have an interest, there is lack of necessary fund and labor.

2) Matters and their Solutions to Establish the System for Constructing Traditional Well

i) Matters on Constructing Traditional Well by Herders

Three representative reasons why constructing Traditional Well by the herders is not advanced are pointed out below.

- Construction site and estimated well depth can't be identified.
- Lack of labor
- Difficulty to procure materials.

Although Ministry of Food and Agriculture has been also supporting the Traditional Well construction, many people think that the Traditional Well can be constructed by the herders themselves. The herders also think that they can do it when the time

comes; however, when they actually started works, there were a lot of difficulties. Consequently, they can't construct enough wells at the moment.

ii) Solution

To promote Traditional Well construction in the future, so the above mentioned problems should be solved. However, since *Soum* government has no budget for Traditional Well construction and the herders have to do it for themselves, it is necessary for *Soum* government to build a system to support the herders.

【Identification of Construction Site and its Depth】

In the geophysical survey executed by Ministry of Food and Agriculture, shallower water source which is suitable for Traditional Well could be found in several sites in each *Soum*. Even if there is a site where water source can be expected from the experience of the herder, it is weak evidence to spend money and labor for construction of Traditional Well. This is one of the reasons why Traditional Well construction is not advanced. Therefore, since water can be surely secured at the point where the Traditional Well used to exist before, the rehabilitation of these well should be promoted. The geophysical survey was carried out at two sites during Traditional Well construction training in the Project. Afterwards, rehabilitation of existing wells was recommended based on priority.

【Securing of Labor】

If Traditional Well construction in *Soum* will be activated, mutual support of the well construction among herders could be expected. Actually in *Erdene Soum*, social activities of *Bag*'s residents are active and the herders' collective work is common. Therefore, their awareness of securing the necessary workload for constructing Traditional Well might be low. It is necessary for *Soum* government to encourage positively herders and change herders' mind.

As for the securing of labor, if allowance is able to be paid, the jobless could be employed in *Soum* Center. However, the most important point is whether the herders have a willingness to construct Traditional Well by using the funds to pay the allowance. Therefore, it is necessary to promote the benefits of Traditional Well construction.

Through the Project, the system was established in *Erdene Soum* to promote rehabilitation of Traditional Wells voluntarily in region or by *Bag* governor's initiative. For *Ulaanbadrakh Soum* and *Khuvsgul Soum*, *Soum* government advanced Traditional Well construction using youth exempted from military service to perform works as a social service activity. By enforcing such measure in the future, securing of labor and spread of technology on the Traditional Well construction can be expected.

【Procurement of Materials】

The method that individual herders procure small quantities of materials raises transportation expense and it takes a lot of time. Therefore, if *Soum* government procures the necessary materials in bulk, the herders' monetary and time load can be reduced. As a capital source for the bulk buying, use of *Soum* Well Fund is expected.

Moreover, most of the materials required for Traditional Well construction are not necessary for the herders' daily life. As it is difficult for the herders to individually procure such materials, the method that *Soum* government manages the materials, and lends them in exchange for a fee will be effective.

3) Typical Structure of Traditional Well and its Construction Method

i) Structure and Construction Method

According to the condition of soil and environment, the type of the Traditional Well is largely classified into masonry type and wooden casing type. In the Gobi region of the Pilot Study Area, the soil type is sandy and its wall is easily collapsed; also it is difficult to obtain wood. Hence, the masonry type shall be a standard.

a) Structure

Structure of the masonry type Traditional Well is shown in Fig. 4.6.20.

- To maintain the water storage part, casing of spring water part shall be enlarged.
- Masonry at the spring part should use plants like *Ders* as buffer materials to avoid collapse. These buffer materials can function as a filter too.
- Casing on the spring water part shall be piled up with stone mixed with cement. (In case of Wooden casing type, this part shall be wood.)
- The part about 1m from the surface shall be sealed with mortar so no dirty water contamination comes in from the surface.

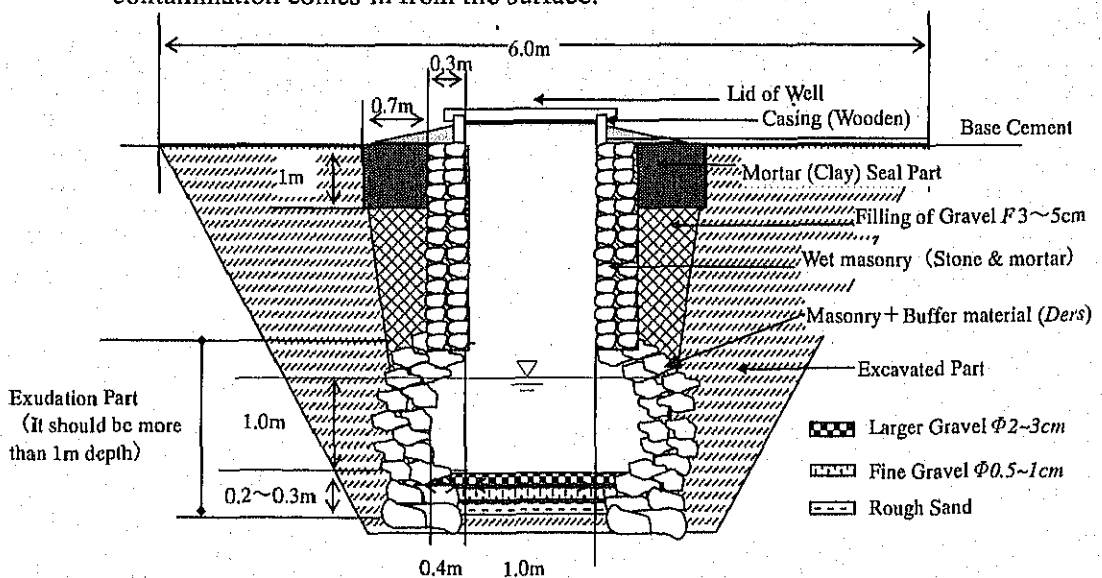


Fig. 4.6.20 Structure of Masonry Type Traditional Well

b) Construction Method

【Selection of Site】

Construction site shall be decided based on the result of geophysical survey, the existing Traditional Well, and topography and plant distribution. If possible, it is desirable to set the estimated excavation depth by executing the geophysical survey and test boring in advance.

【Preparation of Materials】

Prior to construction, necessary equipment and materials shall be obtained. In this case, the accommodation of the laborer in charge of excavation needs to be considered. The following materials shall be procured at the vicinity of construction site. Their procurement places should be also confirmed.

Table 4.6.56 Materials Procured at Site

Material	Required Amount
Stone	19m ³ (about 5 trucks)
Gravel	3.8m ³ (about 1 truck)
Ders	0.5m ³ (about 0.5 truck)

c) Securing of Labor

About eight laborers shall be required for the construction. This shall be secured under the responsibility of the herders who use the well. The *Bag* governor became a supervisor and the wells were constructed with volunteers from the *Bag* in the training program. For well rehabilitations in *Erdene Soum*, herders worked voluntarily cooperatively in the vicinity. It is desirable that a person who is experienced the Traditional Well construction would join in the work for safety management.

d) Excavation

- Diameter of excavation shall be set at more than 2 to 3 m according to the soil, and the well should be dug down in stages.
- It should be dug down to the depth where water has come out about 1 m more, to secure sufficient water.
- Stone and gravel shall be transported and arranged at the site.
- While using *Ders* as a buffer material, inner wall of the water storage part of the well shall be constructed with solid

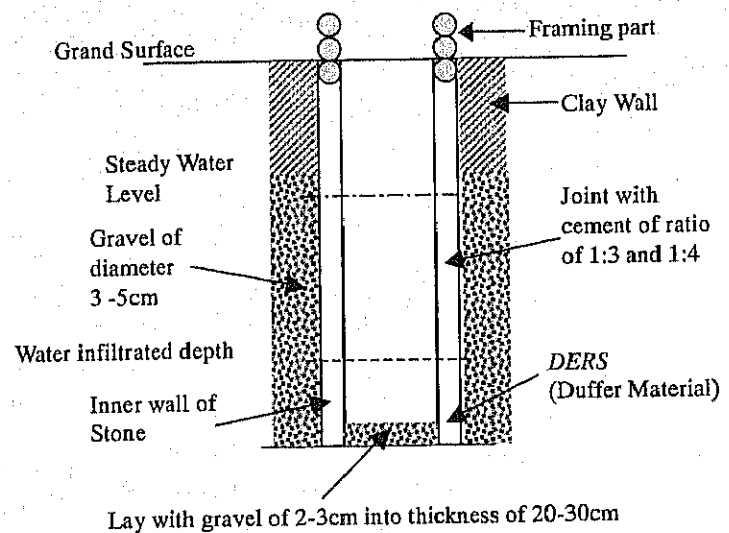


Fig. 4.6.21 Structure of Traditional Well

constructed with solid stone.

- The gap between the wall of the well (excavated hole) and the inner wall shall be filled with gravel and piled up.
- Frame part of 70 cm or less in height shall be made at the opening part of the well.

ii) Equipment and Materials Required for the Construction

【Equipment】

Necessary equipment for one Traditional Well are summarized in Table 4.6.57. 3 sets are to be donated to each *Soum* government. As for these equipment, its rental fee shall be set according to their cost price and service life. *Soum* government shall manage lending it to the herders. All equipment was procured in *Ulaanbaatar* and delivered to *Soums*.

Table 4.6.57 List of Necessary Equipment

Equipments and Materials	Quantity	Unit Price (Tg)	Rental Rate(Tg)	
			1 set	1 piece
Scoop	6	3,900	1,030	180
Pickax	2	4,100	230	120
Hammer	1	9,000	220	110
Crowbar	2	4,200	240	240
Big hammer	1	2,600	230	230
Wheelbarrow	3	50,000	170	170
Chisel	1	4,000	270	270
Saw	1	8,400	1,780	890
Hand Saw	1	6,300	2,100	2,100
Axe	1	10,000	1,110	370
Rope	40	400	990	330
Bucket	3	2,800	400	140
Stake	3	5,000	330	70
Drainage Pump + Drain Hose	1	500,000	500	170
Helmet	3	3,800	13,130	660
Water Boots (Long-Torso)	2	13,500	110	110
Uniform	7	4,800	4,380	2,190
Work Gloves	20	500	70	70
Spare Handle	3	500	1470	210
Wooden foothold	5	1,500	330	70
Total	-	-	41,890	21,760

【Transportation Means for Stone】

Besides the purchased materials such as wood and cement, there are materials such as *Ders* and stones collected by the herders. However, renting truck to collect these materials has the difficulty of cost and time. Consequently, it was planned that a small tractor was donated to *Soum* governments for transportation, and the herders rent it at a reasonable price. Based on the purchased price, rental fee of tractor was set as shown below.

- | | |
|-----|---|
| (1) | Purchasing price (Including transportation expense and tax): Tg 3,065,400 |
| (2) | Estimated service life: 10 years |
| (3) | Estimated use frequency: 8 times/year |
| (4) | Operation and maintenance cost: 5% of purchased Price/year |
| (5) | Charge per use = about Tg 40,000 [(1) x 1.05/ (2) / (3)] |

The tractors were procured from China through an individual shop in the Project, but they broke down sometimes, due to poor trailer materials.

【Material】

Besides the locally procured materials, the following materials shall be prepared and purchased in advance.

Table 4.6.58 Purchased Materials

	Required Amount	Specification	Unit Price (Tg)	Budget (Tg)
Scantling	8	0.15 x 0.15 x 4.0	1,500	12,000
Board	3	0.05 x 0.15 x 4.0	1,333	4,000
Cement	6 bags (300 kg)	50 kg	3,500	21,000
Nail	3 kg	100 mm	1,000	3,000
Total				40,000

【Fuel】

When a drainage pump or tractor is used, fuel is necessary.

Table 4.6.59 Fuel Expense

	Required Amount	Specification	Unit Price (Tg)	Budget (Tg)
Fuel for Drain Pump	10 liter	A-76	450	4,500
Fuel for Tractor	150 liter	Diesel	535	80,250

Note: It is assumed that the tractor would be used for 7-8 km transportation

iii) Construction Cost and Herder's Work

As for the Traditional Well construction, necessary cost is shown at the right.

The herder who constructs the well shall bear these materials cost, equipment cost and labor cost. Especially costs for labor and meals will be increased if the work is prolonged. Therefore, the herders shall be required to fully understanding this.

When it is difficult to prepare these costs at one time, they can use *Soum* Well Fund or pay it by installments after consultation with *Soum* government about payment method of materials and equipment cost.

Table 4.6.60 Construction Cost

	Cost (Tg)
Materials Cost	40,000
Equipments Cost	41,890
Rental Fee of Tractor	40,000
Fuel Expense	84,750
Total	217,520

Note: Besides them, there might be cases that costs for labor and meals are required

4) Notable Points on Monitoring

i) Progress of Traditional Well Construction

【Effect of Campaign】

Number of the constructed Traditional Well, its depth, its capacity such as yield, and method of construction shall be checked to report the effect of the Project. The way of

using the equipment and materials introduced in the Project shall be checked.

【Effect of Traditional Well Improvement】

The Effects such as reduction of watering time and prevention of pasture devastation by the constructed Traditional Well shall be checked.

【Confirmation of Constraints of Well Construction】

Besides the herders' groups who construct the Traditional Wells, if there is the herders' group which abandoned the construction, its reasons shall be checked and the modification of the content of the Project in the future shall be studied.

ii) Management of Equipment

【Soum's Management Capacity for Equipment】

Management condition for equipment, especially its sound management and its loss, shall be checked because the introduced equipment includes many small stuff. Its lending situation and the method of collecting rental charge shall be checked to report the capability of its appropriate management and renewal.

【Use Condition of Equipment and Materials】

The equipment list will be modified through checking of lending records, damages, and the rental charge of each equipment.

iii) Pasture Management

【Change of Pasture Use】

The effect of the constructed Traditional Well shall be checked through monitoring of pasture use change.

(4) Results of Project

1) Results of Traditional Well Construction and Rehabilitation

The number of the Traditional Wells constructed or rehabilitated until September 2005 was 21. Moreover, 6 Traditional Wells were constructed / rehabilitated during the training of this project. Thus, wells in 27 places were constructed or rehabilitated in the Project totally.

The Traditional Well construction / rehabilitation promoted by herder is relatively advanced in *Erdene Soum*. *Erdene* government sets the promotion of Traditional Wells rehabilitation into *Bag* governor's responsibilities and they are trying to make a system that all herders cooperate in Traditional Well construction or rehabilitation in the *Bag*. Therefore, the construction / rehabilitation of Traditional Wells have progressed in *Erdene Soum* more than the other two *Soums*.

On the other hand, *Soum* government took initiative for Traditional Well development in *Ulaanbadrakh Soum* and *Khuvsgul Soum*. Moreover, *Khuvsgul Soum* government has a plan to rehabilitate Traditional Wells at winter camps. In the plan, they will accept the application of the herders to make wells, a team of the Traditional Well construction will be composed in each *Bag*, and the team will make wells by using introduced equipment with no charge.

Table 4.6.61 Results of the Campaign by Each *Soum*

Name of <i>Soum</i>	Results of Traditional Well Construction / Rehabilitation
<i>Erdene</i>	2004: 1 well was newly constructed by initiative of the <i>Soum</i> government, and five wells were rehabilitated by the herders. 2005: 1 new well was constructed and 1 well was rehabilitated by <i>Bag</i> governor and herder. Rehabilitation of 2 more wells are progressing.
<i>Ulaanbadrakh</i>	2004: 1 well was newly constructed by the herders. 2005: 4 new wells were constructed by initiative of the <i>Soum</i> government. (It was executed as 80 th anniversary invent)
<i>Khuvsgul</i>	2004: 1 well was newly constructed by the herders. In addition, 5 wells around the <i>Soum</i> center were rehabilitated by initiative of the <i>Soum</i> government. 2005: 1 well was rehabilitated by herder.

Moreover, 2 wells in *Erdene Soum*, 1 well in *Ulaanbadrakh Soum* and 2 wells in *Khuvsgul Soum* were rehabilitated without using the project equipment in 2005.

2) Result of Use of Equipment and Materials and Fee Collection

Results of current use of equipment and materials and fee collection are as follows:

Table 4.6.62 Results of the Campaign by Each *Soum* (Year 2004)

Name of <i>Soum</i>	Use related with Traditional Well Construction	Use outside Purpose
<i>Erdene</i>	Drainage pump was leased for two sites of the well construction for the training and collected charge. Drainage pump was also leased for the well construction afterwards. Charge collection summed up Tg 52,000 (Tg 13,000 x 4 sites), The charge in two sites is unpaid. The charge for the other equipment is unpaid. Also, the charge of drainage pump used for <i>Bag</i> is unpaid.	Tractor was used for the work of the <i>Soum</i> government such as the plaza of <i>Soum</i> Center. Helmet and uniform are used for the worker of the <i>Soum</i> office. Materials such as board, and work gloves were used for the work of the <i>Soum</i> government, and consumed. As all of these works were for the <i>Soum</i> government, the consumed materials are not restocked.
<i>Ulaanbadrakh</i>	Various kind of equipment was used for the training but yet unpaid. Materials cost of one site was to be collected, but yet unpaid. Drainage pump was used for well construction, but unpaid because the use period is short for three days and the user was poor.	Hammer, saw, wheelbarrows and so on were leased for the work of the <i>Soum</i> office, but not yet collected.
<i>Khuvsgul</i>	Equipment and materials were used for the two wells for the training. Lump sum of Tg 50,000 was collected from one site, and Tg 53,000 was collected from the other site. Tractor was used for the well rehabilitation of the <i>Soum</i> center, but unpaid because of the work of the <i>Soum</i> government. Uniform was used for the well construction and Tg 2,300 was collected.	Tractor and drainage pump were leased for the water supplier in the <i>Soum</i> , and Tg 50,000 was collected in total.

Table 4.6.63 Results of the Campaign by Each *Soum* (Year 2005)

Name of <i>Soum</i>	Status of Equipments Use	Use for other Purposes
<i>Erdene</i>	Drainage pump was leased for 1 new well construction and 1 rehabilitation in this year. Besides this, the pump is lent out to the well rehabilitation in two places now. All lessees understand the charge collection. The equipments other than drainage pump were also leased but their costs were not charged. The charge collection results from last year, Tg69,760 from 6 times usage of drainage pump, and Tg 40,000 from 1 time of the tractor.	Tractor was used for a job of <i>Soum</i> government as garbage collection. Helmet and uniform were used for the workers of the <i>Soum</i> office. Some of charge for these works for the <i>Soum</i> government is restocked in <i>Soum</i> Well Fund.
<i>Ulaanbadrakh</i>	Drainage pumps were used for well rehabilitation in four places but unpaid because it was public activities in <i>Soum</i> .	Equipments were leased for the work of the <i>Soum</i> office, but not yet collected.
<i>Khuvsgul</i>	Drainage pump was used for a well rehabilitation.	Tractor and drainage pump were leased by Tg20,000/month for the water supplier in the <i>Soum</i> .

Main equipment used for the well construction and rehabilitation was drainage pump and tractor. Although the other equipment were leased for the training of well construction, fee is not yet paid, and there is no lending record either, so they might dislike the fee afterwards. Moreover, the tractors were used only in the *Soum* surrounding area since it takes a lot of time to travel a long distance.

It was assumed that the materials such as scantling, board, cement, and so on procured this time were used for the training of the well construction and then funds for procurement for the next construction would be covered by the fee collected from the herders. However, *Khuvsgul Soum* collected nothing, but some portion of the its fee.

As the materials were not used for the training in *Erdene Soum*, there was a problem that the consumed materials for the work of the *Soum* office were not yet compensated.

In *Ulaanbadrakh Soum*, fee collection for the both equipment and materials was not actively done there. Traditional Well construction is advanced on the rule that the user shall bear its cost. It is assumed that *Ulaanbadrakh Soum* could not charge its cost anymore, because the amount of money spent for food and fuel for pump borne by the herders' group was large.

3) Management of Equipment and Materials

i) Maintenance Condition

Management of equipment and materials in the three *Soums* was not enough as of 2004. Especially in the first state of the monitoring in September, maintenance condition of the equipment was bad and entering into the lending record was not enough. As a result of request to improve it until the monitoring in November, maintenance condition of the equipment was improved, but there were some equipment that was already lost. The equipment and materials that had a lot of loss

were the ones used as consumable materials such as scaffolding, and disposables such as work gloves, uniforms, and so on.

The equipment management situation in each *Soum* was confirmed in September, 2005. It seemed that the roles in the equipment management had become clear in each *Soum*. However, the persons in charge of equipment management were changed in *Ulaanbadrakh Soum* and *Khuvsgul Soum*, and succession of job responsibilities was not done well. It was suggested to each *Soum* that the number of broken or leased or uncertain equipment would be confirmed and covered when it is missing. The mentioned equipment means the saws, hammers, etc., but consumables such as work gloves for training of constructing Traditional Well are not included. It is confirmed in final monitoring in November, 2005 that the equipment excluded consumables were maintained well in *Erdene* and *Ulaanbadrakh Soum*.

ii) Management System of Equipment and Materials

In the beginning of the Project, many topics were explained to officials in each *Soum*: namely, the equipment and materials management method and importance of role sharing to divide equipment management, lending management and fee collection. Sample lending record forms were also given at that time. However in actuality, it has been managed according to each *Soum*'s way by responsible personnel. The one place where the system of lending equipment and collecting fee is well operated is *Erdene Soum*, because it is a result of specific operation at the present time.

Table 4.6.64 Management System of Equipment and Materials in Each *Soum*

Name of <i>Soum</i>	Lending System
<i>Erdene</i>	<p>Person responsible for lending is official in charge of food and agriculture, and person in charge of management of equipments and materials is official in charge of equipment, and national budget accountant records paying result to the <i>Soum</i> Well Fund.</p> <ol style="list-style-type: none"> 1) Applicant applies for use of necessary equipments and materials to official in charge of food and agriculture and is taught about the fee. 2) Applicant pays the fee into the <i>Soum</i> Well Fund at the bank, and then passes its certification to the national budget accountant. 3) Official in charge of food and agriculture confirms the certification, issues lending certification, then records the lending. 4) Official in charge of equipment confirms the lending certification, and then leases the equipments and materials. (Actually, deferred payment happens.)
<i>Ulaanbadrakh</i>	<p>Person responsible for lending is official in charge of food and agriculture, and person in charge of management of equipments and materials is official in charge of equipment, and when paying to the <i>Soum</i> Well Fund, official in charge of food and agriculture runs paying certification too. Official in charge of food and agriculture attends to lending offer, official in charge of equipment records the lending. In this case, he/she explains about the fee, and the user pays after using the equipments and materials.</p>
<i>Khuvsgul</i>	<p>Person responsible for lending is official in charge of food and agriculture, and person in charge of management of equipments and materials is official in charge of equipment, and official in charge of food and agriculture runs paying certification to the <i>Soum</i> Well Fund, too.</p> <ol style="list-style-type: none"> 1) Applicant applies for use of necessary equipment and materials to official in charge of food and agriculture. 2) Applicant draws up contract about lending equipment and materials and its charge between official in charge of equipment, and then be leased the equipments and materials. 3) Official in charge of equipment receives the equipment and collects the fee. 4) Official in charge of food and agriculture pays the charge to the <i>Soum</i> Well Fund and records it.

All *Soums* used the equipment and materials for other purposes and works of the *Soum* government. Especially *Erdene Soum* used lots of equipment such as tractor for works of the *Soum* government. In addition, officials in charge of equipment in all *Soums* made unrecorded lending, and management was not thorough. It is necessary to clarify lending system, its process, and responsibility before implementation of the Project. Moreover, it is also necessary to fix the lending form and execute the on the job training continuously through monitoring work.

4) Public Relation of Campaign, and Distribution of Textbook

Content of the campaign is spread through *Bag* governor or *Bag*' day in each *Soum*. However, it seems that the recognition by the herders is low in *Ulaanbadrakh* and *Khuvsgul Soum*.

In addition, the Study Team handed out 30 textbook of Traditional Well construction (refer to ANNEX L) to each *Soum*, and requested them to distribute it to the herders who want it. However, *Ulaanbadrakh Soum* has not yet distributed them, and *Khuvsgul Soum* lost the textbooks. It was expected that textbook distribution could let the herders know the content of the campaign and increase their interest. However, it is assumed that expected result was low because the number of copies was insufficient to distribute to all families. Each *Soum* was requested to enhance its public relations work from now on.

Table 4.6.65 Public Relations and Acknowledgement of Campaign in Each *Soum*

	Public Relations of Campaign	Acknowledgement Level of Campaign
<i>Erdene</i>	- Placard in the board inside of the office - Information spread through <i>Bag</i> governor, and <i>Soum</i> handed the textbook to the applicant	Although the content spread to the person who knew the campaign, acknowledgement level of Campaign is generally low.
<i>Ulaanbadrakh</i>	- <i>Soum</i> explained it to the herders on the herders' Day, when many person gather, in May at <i>Soum</i> center - Informed through <i>Bag</i> governor and the <i>Bag</i> 's Day.	Acknowledgement level of Campaign is generally low. It is assumed that the content is not fully and correctly spread.
<i>Khuvsgul</i>	- Public relations was planned for November, but it was insufficient. It was done on the <i>Bag</i> 's Day, and <i>Soum</i> responded to the herders if asked.	Acknowledgement level of Campaign is generally low.

The Ministry of Food and Agriculture will make a textbook of the Traditional Wells construction in the Gobi regions referring to the manuals made by the Project. Therefore, it was decided that the project would not made another textbook. It is desirable that a Textbook will be distributed not only to *Aimag* personnel and other officials, but also widely to all herder families.

4.7 EVALUATION OF PILOT PROJECT

Each pilot project was evaluated and summarized in a summary table of evaluation results as shown in the sections that follow. Evaluation was given from five viewpoints: Relevance, Effectiveness, Efficiency, Impact, and Sustainability. Moreover, Lessons Learned and Recommendations were given. Explanations of the five evaluation criteria are outlined in Table 4.7.1 below.

Table 4.7.1 Five Criteria of Evaluation

Criteria	Explanation
Relevance	A criterion for considering whether the expected effects of a project (or project purpose and overall goal) meet with the needs of target beneficiaries.
Effectiveness	A criterion for considering whether the implementation of project has benefited (or will benefit) the intended beneficiaries or the target society.
Efficiency	A criterion for considering how economic resource/inputs are converted to results. The main focus is on the relationship between project cost and effects.
Impact	A criterion for considering the effects of the project with an eye on the longer term effects including direct or indirect, positive or negative, intended or unintended.
Sustainability	A criterion for considering whether promoted project activities or produced effects continue after the termination of the assistance by the pilot project.

4.7.1 EVALUATION OF PASTURE UTILIZATION AND WELL DEVELOPMENT PROJECT

<p>1. Outline of the Project</p> <p>* Target area: <i>Erdene Soum, Ulaanbadrakh Soum, Khuvsgul Soum (Dornogobi Aimag)</i></p> <p>* Target Group: Herders Group</p> <p>* Implementation Agency: <i>Soum Government Office, Herders Group</i></p>
<p>1-1 Background of the Project</p> <p>Livestock farming is a key industry of Mongolia, and follows the nomadic system based on a pasture land and water resources. Although nomadic life could not be formed if it lacks either of a pasture or water resource, the imbalance of their distribution in the present condition has obstructed proper pasture use, and has brought desolation of a pasture by concentration of use and expansion of unused or low-frequency use pasture. In this project, the correction of the imbalance is the most important task. Therefore this pilot project aims to alleviate overgrazing by developing water resource and pasture management system for efficient use of pasture.</p> <p>Moreover, in order to use the pasture continuously, operation and management (hereinafter called "O&M") of well and pasture management activities are indispensable. Sustainability of a well has not been possible because herder who is a beneficiary had not borne it is the maintenance role in the past. Therefore, this project does not execute only construction or rehabilitation a well but establishment of O&M system for well facilities through establishment and management of Herders Well Fund / <i>Soum Well Fund</i>, and strengthen herders ownership of well facilities using benefit theory, capacity development of the pasture management towards the water resources, and pasture use monitoring system.</p>
<p>1-2 Narrative Summary of the Project</p> <p>(1) Purpose</p> <ol style="list-style-type: none"> 1) Project Purpose: "Overgrazing is alleviated" 2) Overall Goal: "Pasture is used sustainably" <p>(2) Outputs</p> <ol style="list-style-type: none"> 1) Well operation and maintenance system is established by herders 2) Wells are rehabilitated/ constructed for pasture utilization 3) Pasture utilization system is established <p>(3) Inputs</p> <p>Japan:</p> <p>Study Team, Facilitators, Well rehabilitation (12 site) / New construction (5 site): JPY 14.2 Million (including the cost for well construction materials, pump, generator), Training cost: JPY 42,000, Textbook for Pasture Measurement</p>

Dornogobi Aimag

Agriculture Officer, Well O&M Training fee (Tg 210,000)

Soum Government:

Soum governor, *Bag* governor, Agricultural Officer, State Budget Officer, Chairperson of *Soum Khural*

Herders Group:

Group member, Contribution for well construction/rehabilitation (Shaft Well - Tg 500,000 / Production Well - Tg750,000), Cost for well O&M.

2. Results of Evaluation

2-1. Achievement of the Project

(1) Project Purpose

By having carried out well development, it is expected that overgrazing was alleviated on some level because the usable pasture area is increased in unused / low-frequency use pasture and efficiency of water supply is improved. But the pasture condition in the region including the pasture condition around the well is unfavorable because of the rain shortage in summer which continues after the project begins. Therefore, It is premature to judge at this stage if sustainable O&M by the Target Group and appropriate pasture utilization based on the resource management is indispensable to achieve the project purpose.

(2) Outputs

Output 1) Well operation and maintenance system is established by herders.

15 herders groups continue their activities although the well which is installed by the project cannot be used as planned under the influence of a drought, and herders faced a difficulty to maintain their group activity while group members are dispersed. Installed well falls into impossible use for a long period frequently because of the breakdown of a generator and taking a lot of time for its repair. There are many subjects about the generator. Therefore, training to develop a mechanic in each *Soum* was executed under the cooperation with *Dornogobi Aimag*. Furthermore, spare parts are purchased by using *Soum* Well Fund and stocked at *Soum* government office and O&M system which organized by *Soum* government, and Herders Group cooperation was developed. But it is premature to judge whether its system works and continuous O&M activity and active efforts by *Soum* government are necessary.

Output 2) Wells are rehabilitated/ constructed for pasture utilization

Totally, 17 wells were developed in three *Soum* and this result was attained: 15 Production Wells increased and a pump was installed in two Shaft Wells. However, according to external conditions (drought), the pasture condition around the well is bad and well and pasture use may be limited.

Output 3) Pasture utilization system is established

Soum government took the lead and various measures, such as simple pasture measurement by cooperation with herders and *Soum* government, migration monitoring, survey of water resource use and grasp of livestock number for each water resource, were introduced. A monitoring system both in pasture production and use was built.

Traditional pasture use practice is functioning properly by herders seasonal migration and concentration avoidance to a particular well according to a pasture condition. Although effective pasture use instruction by *Soum* government to herder based on accumulation, analysis, and evaluation of the practical information about pasture management is expected, it is required to provide a training for *Soum* government, *Bag* governor and Herders.

2-2. Summary of Evaluation Results

(1) Relevance

In the Gobi region which is a dry land, the livestock farming depends on the well and sustainably O&M of well is a serious issue facing a livestock farming in rural areas. Under the scarce pasture resources in the region, there is the necessity of pasture management which does not cause concentration of the livestock to water resources and overgrazing; this project can contribute to that.

Government Food and Agriculture Policy (2003) said that it is urgent to develop water resource for effective pasture use and establish O&M system. Moreover, revised "Water Law" (July 2004) determined that herder takes the responsibility of operation and management of the well instead of protecting herders rights to use well. According to this water law, "Basic principle concerning expenditure and possession of water supply facilities and engineering well which are rehabilitated/constructed by the national budget or overseas financing or assistance" was approved in June 2005. This principle determined that: 1) Herders' contribution shall be a certain fixed rate (fixed amount is adopted by this project) of the construction works, 2) Payment before the construction works is necessary (installment payment after the construction works is adopted by this project). According to this principle, herders' contribution amount of this project was revised (reduced) and relevance of this project is maintained. These payment methods and revised amount of contribution were confirmed by the Ministry of Food and Agriculture, *Dornogobi Aimag* and each *Soum* government.

About the rule of pasture use, a conventional way is still continued and works well; herders think a written rule is not necessary. Even if the rule is formulated with the present condition, it becomes unrealizable. Therefore, by establishing of the *Soum* government-oriented pasture management system which can provide pasture information to herders, the relevance and practicability is maintained. But it requires more time for establishment of the output.

(2) Effectiveness

Utilizable pasture area has been increased by developing 17 wells; 5 new wells and 12 rehabilitated wells (Achievement of "Output 2"). To maintain this output and secure the effectiveness of this project, sustainable O&M by herders group (Achievement of "Output 1") is indispensable. And the role of *Soum* government that controls and adjusts the herders activities is very important to attain the project purpose.

All herder groups understand well about the purpose of Herders Well Fund and contribution to the *Soum* Well Fund. And their effectiveness has been confirmed by the purchasing of the spare parts for generator.

About "Output 3", integrated pasture diagnostic system by *Soum* government was formulated by introducing various measures such as enforcement of simple pasture measurement, migration monitoring, survey of water resource use, grasping livestock numbers in every well / water resource.

(3) Effectiveness

5 wells were constructed and 12 wells were rehabilitated; totally 17 wells were developed. Utilization of the well by herders group has started at 15 sites and still continues until now. It can be judged that these well developments contribute to achieve the project purpose and outputs.

Well facilities were selected most suitable model at the time of procurement, in consideration of capacity, quality and spare parts supply. But actually, failure or malfunction of generator has occurred frequently and 10 groups among 15 experienced trouble. It is thought that the causes of the failure are mainly incorrect management by the users. Therefore, technical training was held in September, 2005 to make the *Soum* government and *Aimag* able to deal with the trouble of generator. This training was held by the budget of *Dornogobi Aimag* under the coordination of the study team.

Though pasture management training, a set of simple instrument for pasture measurement (30 sets to each *Soum*) was given to herders, and "Pasture measurements manual in winter camp and spring camp" was produced by the Study Team and distributed 40 copies to each *Soum*. In this way, it is judged that herders who attended the pasture measurement training acquired ability to measure a pasture condition objectively and quantitatively. The calculation method of carrying capacity and pasture measuring method was also introduced to *Soum* agricultural officer.

(4) Impact

Herders actually feel the positive impact of machine well development. Well development led to increase of utilizable pasture area and to saving watering and its waiting time. Consequently it became possible to spare much pasturage time and to fatten livestock. About 80% of the participants groups were satisfied with this project. Moreover, large impact was confirmed that not only the participants in the project but the herders in the same or even neighboring *Soum* have used the installed well at the time of "Otor" (Mongolian nomadic herder movement between pastures). On the other hand, there are also some groups that could not feel the positive impact of the well because they could not use their well because unfavorable drought affected pasture conditions around the well.

Although it is a fact that the cost sharing is a heavy burden for each group, understanding of the cost sharing has deepened more by being provided the occasion to discuss directly between herders, *Aimag* and the Ministry of Food and Agriculture at "the Information Exchange Meeting" held in November 2004 in *Sainshand*. This meeting contributed greatly to achieve the project purpose.

(5) Sustainability

Contribution from herders, fair fund management by *Soum* government, establishment of O&M system for the well and herder group continuous activity are important factors to ensure this project sustainable.

Status of *Soum* Well Fund had not been grasped in *Ulaanbadrakh* and *Khuvsgul Soum* government because *Soum* governor was changed and project matters were not been taken over from their predecessor. This caused herder's distrust and consequently herder's payment to the fund stagnated. To avoid the same trouble and to make the project sustainably, it is required for *Soum* government to take over their works responsibly and to establish a transparent fund management according to rules.

Soum Well Fund was established in order to develop water resource in *Soum* and it is used for purchasing spare parts and also providing soft loan for herder to purchase their well facilities / equipments. The fund is based on the contribution from the herders who participates the project and payment from the herders is the basic assumption. Herder group is obliged to pay Tg 750,000 in the case of Production Well, Tg 500,000 in the case of Shaft Well to the fund in three years (within the year 2006). The situation of the payment is shown below and it may cause trouble to future sustainability in *Ulaanbadrakh* and *Khuvsgul Soum*. The situation of the *Erdene Soum* is favorable.

Situation of Herder's Payment to the Soum Well Fund in Each Soum (2005/11/30)

	<i>Erdene</i>	<i>Ulaanbadrakh</i>	<i>Khuvsgul</i>
Result of the herder's contribution to the Soum Well Fund (Tg)	1,910,000*	1,060,500	993,435
Achievement to the planned amount in November, 2005 (%)	95	43	55
Number of Herder Group	5	6	4

*The actual balance of the *Erdene Soum's* fund is Tg 2,120,000 because the *Soum* government paid for the well under their control.

Training for *Soum* mechanic for well equipment was executed with the cooperation of *Dornogobi Aimag* and spare parts stock in each *Soum* was prepared (its delivery from the parts distributor to each *Soum* has not been completed at the moment). The well O&M system is now ready.

About the sustainability of herder group, all 15 groups which started well utilization and their activity are active until now; it is foreseen that they will continue their activity continuously even in the future. There are two groups which consist of only one household. Although economic burdens, such as payment to the fund, become heavy in these households, they intend to continue their activity and to manage their well because they realized the effect and convenience of installed well.

To conclude, the sustainability of this project is assured on some level. To ensure it, herder's continuous payment to the *Soum Well Fund*, establishment of well O&M system and capacity development of *Soum* mechanic are necessary.

2-3. Factors Promoting Sustainability and Impact

(1) Factors concerning to Planning

As a result of imposing herder's burden for their well development, 15 herder groups operate and maintain their well continuously and this can be said the herder's organization is achieved some positive results.

(2) Factors concerning to the Implementation Process

Cooperation with *Soum* government is required for the O&M of the well in the rural area where there is not enough social infrastructure such as communication and distribution system. Through establishment of *Soum Well Fund*, *Soum* government gets interested in the situation of a well, and they created an opportunity to talk with herders and came to have the responsibility for O&M of the well; finally, *Soum* government is contributing to ensure sustainability of the project.

"Information Exchange Meeting", which was held in *Sainshand*, contributed to ensure sustainability of the project because the meeting provides to the herders an opportunity to exchange directly with central government and it helped herder to understand about the contribution to the *Soum Well Fund*.

Three workshops including final evaluation workshop were held at each herder group and the workshop provided an opportunity to herders to discuss about O&M of their well and also they got the knowledge about the organizational operation and basic accounting method. Herder's organization and execution of workshop were effective for the establishment of sustainability and well O&M system.

2-4. Factors Inhibiting Sustainability and Impact

- Supplier of the generator in *Ulaanbaatar* sometimes did not attend for repair and the generator remained untouched for several months or even six months at the supplier. It is required for the supplier prompt attention for the demands of the repair by herder group. These cases shall be avoided because they influence migration, payment to the *Soum Well Fund* and well O&M of herder group. In fact, there is not enough bargaining ability and tools for herder group to negotiate with supplier which is based in *Ulaanbaatar*, far from herders.
- Generators broke down frequently. Although it is possible that the cause of failure is improper use and maintenance by user, it is also considered the problem of the quality of generator itself. To cope with this problem caused by the generator, training for a mechanic was held and spare parts stock in *Soum* government was made. Although these countermeasures made an O&M system ready to some extent, ability of mechanic is not sufficient yet.
- When the executive official (*Soum* governor and Agricultural officer) of *Soum* government was changed, *Soum* government did not grasp the situation of *Soum Well Fund* temporarily because there was no handover process from their predecessor.

2-5. Conclusion

Alleviation of overgrazing as a project purpose is achieved to some extent. To ensure this result, continuous O&M of the well and further well development is required. All herder groups are active and maintaining their well continuously under the present condition. In order to maintain the well continuously even in the future, there are several issues to be solved such as payment by herder to the *Soum* Well Fund and whether O&M system which was established in the final stage of the project works.

To alleviate the overgrazing not only well development is required but establishment of an integrated pasture management system since the project purpose is hardly achieved by only well development. This pilot project tried to establish pasture management system mainly lead by *Soum* government with developing several management tools such as livestock number, herder's migration record, water resource survey and simple pasture carrying capacity survey. Capacity of users of these tools such as herder and agriculture officer of *Soum* government will be developed through training. The users merely acquired elementary understanding but knowledge and skill need to be acquired completely by user.

2-6. Recommendations

- A part of well construction cost should be charged to beneficiary herder by the "Basic principle concerning expenditure and possession of water supply facilities and engineering well which are rehabilitated / constructed by the national budget or overseas financing or assistance". But fixed rate system according to the well type is recommended due to following reasons: 1) Construction cost varies by well with digging depth etc., and it is not inequitable because the cost does not correspond to well capacity, 2) beneficiary herder can not know the amount of contribution until a cost of construction is decided, 3) procedure and calculation of contribution amount is complicated.
- Beneficiary should bear responsibility of well maintenance. But in rural areas where there is not enough communication or delivery system, *Soum* government's support is required because it is difficult for beneficiary herders to negotiate with dealers about repairs and to procure parts. Therefore, establishment of *Soum* Well Fund is recommended since it is very important for *Soum* government to keep small financial resources for its support.
- It is necessary to establish a system which can provide consultation service before breaking down of well facilities for sustainable well maintenance and utilization. Although the results has not been confirmed yet because of the short project period, training for mechanic in each *Soum* introduced at the final stage of the project is highly appropriate. Therefore, introducing sufficient training and well maintenance support system are highly recommended with well development.
- It is recommended that the pasture survey around the well should be included into well utilization contract to understand for *Soum* government the pasture conditions where a well will be developed.
- This pilot project realized fewer numbers of wells than *Soum* government's proposal. If balanced well development in the area is not executed, these wells which were developed by the project will have a heavy load. Immediate further well development in the area is recommended
- Herder groups had the tendency to want a well at the place near the conventional migration area, against the intention to develop unused or low used pasture by *Soum* government. To develop unused or low used pasture in order to increase the opportunity of pasture use and unload to the existing well, it is recommended that *Soum* government develops *Soum*'s own wells which can serve effectively in the whole area, not only based on the request from herders. In such case, it should be considered that *Soum* government utilizes financial resources such as *Soum* Well Fund.

2-7. Lesson Learned

- It is judged that the contribution of beneficiary has strengthened the ownership over the well of herder group and the sustainability of well maintenance.
- It is required for *Soum* government to manage the seed money which is contributed by herders strictly according to the rules.
- It is considered that "Participatory Approach" of the project contributed to revitalization of local communities.
- Finally, a well developer which exists only in one company in the province (*Aimag*) will cover the O & M of well facilities included well equipment. Therefore, participation of a local contractor to the bid for construction or equipment procurement for well development is surely needed. In case the local contractor loses the bid, a measure to get them to cooperate for the well maintenance is needed.
- For sustainable utilization of the well, it is necessary for beneficiary herders to realize the merits of the installed well. But in the initial stage, many mechanical troubles may occur by the reason of user's inexperience. Therefore, it is preferable to include the guarantee of equipment and facilities into the bid and O & M fee may be included into the price.
- Responsibility for the well maintenance lies with beneficiary. But beneficiary herder has difficulty procuring spare parts and repair negotiation with suppliers under the inadequate distribution system in rural areas, therefore, local administration should continuously support them to some extent.

- It is difficult or impossible to claim for repair by only herders, although only one case was observed that herder group requested repair of generator by themselves and even went to *Ulaanbaatar*. Therefore, it is considered to select lower specification equipment which can be got and fixed in the local area or to develop human resource who can deal with equipment trouble.
- In case only a little equipment is introduced by a project, private company's interest in introduced equipment is low. Therefore, efforts to introduce equipment of the same type elsewhere are required.
- To avoid conflict among herders over the wells installed by the project, central or local government should announce the way of beneficiary theory for engineering wells at the earliest possible date. A concrete amount of contribution should also be announced.
- It is necessary for herders to make a internal fund for maintenance of their well in the future before well use starts.

2-8. Follow-up Situation

- It is necessary for *Dornogobi Aimag* to monitor each *Soum*, herder's payment to *Soum Well Fund* and its operation.
- It is necessary for *Dornogobi Aimag* to strengthen well O & M support system and to support a mechanic of each *Soum* in cooperation with the well developer and expert in the local area.
- It is necessary for *Dornogobi Aimag* to monitor the activities of pasture measurement executed by herder and its data summarization by *Soum* government. Also, it is necessary for *Aimag Meteorological Office* to control the summarization and to use its data extensively. Moreover, support by *Dornogobi Aimag* to *Soum* government is required for smooth execution of the data collection, analyzing and evaluation.

4.7.2 EVALUATION OF LIVESTOCK FUND PROJECT

1. Outline of the Project

* Target area: *Erdene Soum*

* Target Group: *Erdene Soum* Government

* Implementation Agency: *Erdene Soum* Government

1-1 Background of the Project

There are many herders who lost livestock by *Dzud* not only in the Study Area but also in Mongolia as a whole. As for the pattern of livestock farming, a herder who does not have a certain number of livestock to feed his family members, consumes more livestock than its annual increase, and so the livestock decreases annually. Sometime this is caused by their low herding skill, but in many cases, they lost or decreased their total number of livestock by *Dzud* disaster and their management scale became smaller than their self-consumption. To maintain the self-sustained life of herder, it is necessary to improve herding technique and increase heads of their own livestock at a certain level and to take a measures for herders not to fall into poverty. Moreover, diffusion of superior livestock is expected in the *Soum* as a whole because the loaned livestock includes such superior livestock.

1-2 Narrative Summary of the Project

(1) Purpose

- 1) Project Purpose: *Soum* government establishes Livestock Fund
- 2) Overall Goal: Livestock farming of herder with small livestock become healthy
Quality of livestock improves in the *Soum* as a whole

(2) Output

- 1) Administrative structure of this fund is established in *Soum*
- 2) Supporting group for loaned herder is build-up
- 3) Appropriate operation of livestock fund is carried out

(3) Inputs

Japan:

Study Team member

Livestock (including superior livestock) as a resource of fund : 600 heads: JPY 2.06 Million

Soum Government:

Soum governor, Agricultural Officer, *Bag* governor, Manager of loaning livestock, Responsible person of Livestock Fund, Running cost of Livestock Fund

Herder group:

Supporting herder (Guarantor)

2. Results of Evaluation

2-1. Achievement of the Project

(1) Project Purpose

Livestock Fund was established and operated actively by *Erdene Soum* government. The second loan was executed smoothly since the first year's repayment was executed as planned, therefore, it is judged that the fund was operated successfully in the initial stage. The possibility of project purpose achievement is high when the *Soum* government acquires further experience and operates the fund continuously.

(2) Output

Output1) Administrative structure of this fund is established in *Soum*

The rules of the livestock fund were formulated and the operation of the fund has been started. This fund is managed and operated by "Livestock Fund Steering Committee" (hereinafter called LFSC) which consists of *Soum* governor, Agricultural Officer, Budget Officer of the *Soum* government and it is judged that this output was achieved.

Output2) Supporting group for loaned herder is built-up

A loan contract was concluded and the loan was started for six herders. Support herder (guarantor) is assigned to each borrowing herder. The *Soum* government monitors borrowing herders once every three month and *Bag* Governor monitors once a month. Consequently, this output was attained.

Output3) Appropriate operation of livestock fund is carried out

The first repayment from borrowing herder was executed as planned. The fund was operated properly by the *Soum* government. It is necessary for LFSC to monitor borrowers and operate the fund continuously.

2-2. Results of Evaluation

(1) Relevance

If herder does not have a certain number of livestock, the total will be decreased year by year because self-consumption will be exceed than natural increase of livestock. Therefore, to maintain the herder's life, it is necessary to increase the number of livestock more than a certain number of heads and also to improve herding technique.

The average number of livestock per household in the area is around 100 heads and it is less than 200 heads whose self-sustained livelihood is generally enabled. The needs of the livestock fund are very high and the fund has been provided already by international institutions such as World Bank and others. In the Mongolian PRSP (Poverty Reduction Strategy Paper; 2003), Livestock Fund, Livestock Insurance, and Feed Reservation are mentioned as effective measures for poverty reduction or against drought and *Dzud*. Relevance of this project can be judged very high.

Promotion of the local elite breed livestock is mentioned in the National Food and Agriculture Policy (2003). Therefore, the relevance of it can be judged very high. Moreover, increasing the number of elite breed livestock is one of the priority issues of *Dornogobi Aimag*. The *Aimag* is promoting the elite breed livestock and holds exhibitions regularly. When this pilot project was started, the *Aimag* Governor announced that the *Aimag* will promote the livestock fund and also *Erdene Soum* government expressed that they will operate the project certainly. Consequently, it can be judged that the relevance of this project is very high.

(2) Effectiveness

Soum government operates and manages the Fund actively and the second finance amount was provided based on the repayment from the 1st year's finance. Project purpose "Livestock Fund is established by the *Soum* government" will be attained because all of outputs will be achieved.

About 50 heads of livestock were provided by the conventional livestock fund project, but this project provides livestock finance to about 100 heads per household and the importance is given to severe criteria and supporting system of borrower. This model can contribute for damaged herder to increase the number of livestock at the level which can maintain herder livelihood. It is judged that this pilot project is effective as a model for the remedy of disaster such as *Dzud* and drought because the fund has operated smoothly until now.

(3) Efficiency

The livestock fund was established and managed by the "LFSC" which consists of three persons of *Soum* Governor, Agricultural Officer and Budget Officer. This committee manages the repayment from the borrower herder, selects the candidate of next borrower and holds a meeting with herders regularly. Therefore it is judged the committee works actively and continuously.

Tg 21,095,357 has been used for the provision of 600 heads of livestock in June-July 2004 and 6 herders have received a loan. At the time of Mid-term Evaluation (I) in December 2004, the certification of elite breed livestock had not been acquired but now, it was acquired in *Sukhbaatar Aimag*. the first repayment was executed on schedule and 133 heads of livestock was repaid to the Fund while the projected heads was 108.

In the plan, 14 herders excluding 6 herders who received the first fund will receive the loan of 1,300 heads of livestock totally in six years. It is foreseen that the efficiency of this project is high because all the outputs of this project are likely to be attained, if the project does not receive the restriction from the external conditions such as *Dzud* and drought.

(4) Impact(prediction)

The interest of herders in this pilot project is very high. Even the herders out of the project area are interested in this project. This fund project will provide 1900 heads for seven years and the number of direct beneficiary herders is twenty. It is effective as a remedy for poverty and the disaster such as *Dzud* and drought. If the number of livestock can be increased prosperously, income will be increased and it will be possible for herder to maintain a stable livelihood. Therefore, herders have high expectations for this project.

Moreover, if the sustainability of this project is secured, the positive impact that the quality of the livestock in the *Soum* will be improved by the introduction and diffusion of elite breed.

(5) Sustainability(prediction)

Erdene Soum government operates the fund according to the rules and the fund will be operated continuously by the *Erdene Soum*. The fund will be maintained even in the future since the payback from the first borrower was executed as planned and the borrower has a sense of responsibility for the repayment. Therefore, it can be judged that the sustainability of this project is high. To ensure this sustainability, *Soum* government should create a stockpile of fodder and prepare for wintering.

2-3. Factors Promoting Sustainability and Impact

Soum government promotes the project through "Herder's Day" or any other occasion and they explained the purpose of the project and provided necessary information. This campaign by *Soum* government made borrower's sense of responsibility high and it led to high repayment rate. And it is also an important factor that the *Soum* government applied strict loan terms for the selection of candidate herders. In addition it was just as well that project scale was enough so as to loan the next borrowers.

2-4. Factors Inhibiting Sustainability and Impact

(1) Factors concerning to Planning

In the plan, all of the certificated elite breed livestock should be procured from *Sukhbaatar Aimag* but it wasn't because there was no herder who could provide such an amount of livestock all at once. And it took a lot of trouble and transportation time. Therefore, one part of the elite breed livestock was procured from herder in *Erdene Soum* who introduced elite breed before.

(2) Factors concerning to the Implementation Process

A claim about loan livestock was issued from a borrower because young livestock without parental relationship and weak livestock were mingled with some in the loan livestock.

2-5. Conclusion

It is judged that the base of the management for the livestock fund project was established since the fund operated smoothly in the first and second year. *Erdene Soum* government got used to operation of the fund well and the project became known widely to the herders. Circumstances surrounding the project are favorable.

2-6. Recommendations

It is necessary to clarify that the selection criteria and method of loan and the procedure of the fund operation. Transparent management is needed.

Under the present loan conditions, "possession of the certain number of livestock" is required as a condition. *Erdene Soum* government is planning to provide a loan for the herders without livestock. Therefore, training for herders without livestock which is planned by the *Erdene Soum* government should certainly be executed.

2-7. Lessons Learned

- The operation of the fund and selection of borrowing herder according to the rules are effective. Smooth operation of the fund will be possible when the fund management gets the trust from herders by keeping its transparency.
- It is necessary to pay attention not to mingle the young livestock without parental relationship or weak livestock when selecting and handing over the loan livestock.
- It is desirable that a large household should be excluded from the loan candidate because it is difficult for the large household to refund since they should consume a lot.
- Follow-up by *Soum* government and *Bag* Governor is effective for raising awareness of herders.

2-8. Follow-up Situation

- *Soum* government should give herders meticulous instruction about keeping livelihood or purchase of winterfeed for wintering. Once repayment is stagnated, rebuilding of a loan plan will take a long time. It is required to cope with the guarantee.
- It is required for *Soum* government to supervise the sire rotation every two years to avoid inbreeding. At the same time, it is important to grasp the increase of the number of elite breed livestock.
- *Soum* government executed the loan less than 100 heads in the second year. It is necessary to monitor to these borrowers and if some problems occur, prompt attention is required by the *Soum* government.
- *Soum* government has a idea to train "herders without livestock" by "affluent herders who have good herding technique" and that "affluent herders" become guarantors of "herders without livestock". Livestock Fund can be effective for "improvement of herding technique" if the plan goes well. It should be executed based on ample surveying.

4.7.3 EVALUATION OF DAIRY PRODUCTS SALE PROJECT

1. Outline of the Project

* Target area: *Erdene Soum* (*Burdene* Sanatorium and its around area)

* Target Group: *Erdene Soum* Government

* Implementation Agency: *Erdene Soum* Government

1-1 Background of the Project

It is possible to stabilize a livelihood of herders by improving financial health of the *Burdene* Sanatorium (hereinafter called "the Sanatorium") which is operated by *Erdene Soum* government in summer season (from June to August) because if it is improved, camel milk procurement of the Sanatorium can increase and this can lead to increase sales opportunities and cash income of herders. Moreover, it will be possible to organize herders and shipments cooperatively, if the increase of sales opportunities of camel milk raises herder's recognition about camel milk. Through this project, herders can have a steady place for sales of milk and dairy products.

1-2 Narrative Summary of the Project

(1) Purpose

- 1) Project Purpose: Business situation of the Sanatorium is improved
- 2) Overall Goal: Cash income of herder around the Sanatorium increases

(2) Outputs

- Output1) Purchasing value and amount of dairy products from the herder around the Sanatorium increase
- Output2) Customers of the Sanatorium increase.

(3) Inputs

Japan:

Study Team, Small water purifier (JPY 420,000), Construction materials for the water purifier house (JPY 140,000)

Soum Government:

Soum Governor, *Bag* Governor, Agricultural Officer. Workforce and expenses for construction of water purifier house

Herder Group:

Herder group member, Milk, Operation cost of dairy products, Transportation cost

2. Results of Evaluation

2-1. Achievement of the Project

(1) Project Purpose : Business situation of the Sanatorium is improved

Benefit was improved as profit for 2004, Tg 247,530 even though the result in 2003 was a deficit of Tg 203,250. Also, the result of 2005 was a deficit of Tg 25,782*. But *Erdene Soum* government is very much satisfied with this result* and it is judged that the project purpose is almost achieved. (* This figure included the depreciation cost for water purifier. On the record of the *Soum* surplus of Tg 234,480 in 2005, surplus of Tg 807,530 in 2004 were recorded because the depreciation cost is not recorded in their account.)

(2) Outputs

Output1) Purchasing value and amount of dairy products from the herders around the Sanatorium increase

Amount of dairy products purchase by the Sanatorium was Tg 538,260 in 2003 and it became Tg 900,354 (up 67% compared with 2003) in 2004 and Tg 945,869 (up 76%) in 2005. Therefore, it attained the target. But the purchase volume by the Sanatorium did not reach the target*. The purchase volume of camel and goat milk was 1,307/ in 2003, and it became after the project started, 1,623/ in 2004 (up 24%) and 1,803/ in 2005 (up 38%). (*the target is up 100%-160% in volume)

Output2) Customers of the Sanatorium increase.

Number of customers in 2005 was 174 people. It increased 45% compare with 2003 and total stay of visitors was 1,960 days, up 44% over 2003. These results were viewed positively.

2-2. Results of Evaluation

(1) Relevance

At the Sanatorium, processed camel milk named by *Botsargaa* is provided to the customers as a health drink. And the suppliers of it are herders from around the Sanatorium. As a rural node development, improvement of the services and management can lead to increase the demand of the dairy products. Therefore, it is expected that the herders who are suppliers can increase their cash income. Improving the services and management of the Sanatorium is the most important issues of the *Erdene Soum* government and it may be able to make herder's livelihood and cash income stable. It is judged that the needs and relevance of this project are high.

(2) Effectiveness

"Output1: Purchasing value and amount of dairy products from the herders around the Sanatorium increase" is achieved because the purchasing value increased 76% or beyond the target amount by 40%. But the purchasing volume increased only 38% even though the target is up 100-160%. "Output 2: Customers of the Sanatorium increase" is achieved by increasing 45%. As a result, it is judged that the project purpose is almost achieved.

Results of Dairy Products Sale Project

- From 2003 before the project, up to 2005 -

	2003	2004	2005
Number of Customer	120	141 (18%)	174 (45%)
Total Sales Volume by Herders (L) (Total Volume Purchased by the Sanatorium)	1,307	1,623 (24%)	1,803 (38%)
<i>Breakdown : Camel Milk</i>	976	1,201 (23%)	1,381 (42%)
<i>Goat Milk</i>	331	423 (28%)	422 (27%)
Total Income of the herder (Tg) (Total Value Purchased by the Sanatorium)	538,260	900,354 (67%)	945,896 (76%)
Number of Herder Group	3	4	4

* Percentage in parentheses shows growth rate from 2003

(3) Efficiency

Inputs were executed on schedule. In July 2004, a water purifier was introduced as part of the Sanatorium's service reform. But it stopped only one week after the installation because of the clogging of the filter. The quality of water, which was taken from the deep well developed by another pilot project "PASTURE UTILIZATION AND WELL DEVELOPMENT PROJECT", is more unfavorable than expected (excess of iron). Subsequently, *Erdene Soum* government constructed a new Traditional Well as part of another pilot project "TRADITIONAL WELL CAMPAIGN PROJECT". And now, the water purifier functions normally by using water from the Traditional Well. Therefore, the *Erdene Soum* government executed an aggressive advertising campaign featuring high quality camel milk and purified water, and the number of customers was increased as a result of it.

Water filter should be changed periodically. It is judged the relevance of installation and selection of water purifier as a part of customer services improvement is high because; it means clearly that the required water conditions do not exist other than a water purifier; and if the profit of the Sanatorium is as favorable in the future, it can be forecast that the Sanatorium can execute the procurement of the filter and maintain the water purifier continuously.

(4) Impact

As a result of improving the financial situation of the Sanatorium and increasing the number of customers, the value and volume purchased by the Sanatorium was increased and the cash income per herder group (household) was also increased.

Transition of Average Income from the Sanatorium per Herder Group

	2003 (without project)	2004	2005
Average Income from the Sanatorium (Tg/Group)	179,000	225,000	236,000
Growth rate compared with 2003 (%)	-	26%	32%

Although it is an important sources of cash income other than cashmere, herders may recognize the market value of camel milk and increase the number of camels. Then, it will be possible to use pasture land suitable for big livestock effectively. Moreover, production adjustment was tried by herders and herder's consciousness as a group is being developed.

(5) Sustainability (prediction)

Sustainability of this project is very high if the Sanatorium continues present stable management even in the future.

2-3. Factors Promoting Sustainability and Impact

- The Sanatorium is managed by the *Erdene Soum* government. They demonstrated strong leadership and it contributed greatly to the achievement of the project.
- Production adjustment among herders who ship to the Sanatorium has been executed.

2-4. Factors Inhibiting Sustainability and Impact

(1) Factors concerning to Planning

In the plan, this project linked with "PASTURE UTILIZATION AND WELL DEVELOPMENT PROJECT" and it was expected that herder organization will be established. However, the water quality of the developed well by the above referenced project was unfavorable (excess of iron: 34mg/l); therefore, herder group could not be established.

(2) Factors concerning to the Implementation Process

The accounting is controlled very well by the *Erdene Soum* government and there is no noticeable issue.

2-5. Conclusion

Financial situation of the Sanatorium was improved and also cash income of herders around it was improved. Therefore, project purpose and also overall goal have been achieved. Also, it can be said that this project was successful as rural area development. In order to improve herder's cash income further, it is expected for herders to work and make shipments as an organization.

2-6. Recommendation

It is recommended for the administration to organize herders because concerted production and shipment lead to improving cash income of the herders in the local area.

2-7. Lesson Learned

Greater results will be obtained if herders work cooperatively when developing the sales place for rural livestock farming

2-8. Follow-up Situation

It is required to clarify a supplier of the water filter and its price since it is necessary to exchange them periodically.

4.7.4 EVALUATION OF DAIRY PRODUCTS SHIPMENT AND SALE PROJECT

1. Outline of the Project

Target area: *Erdene Soum*

Target Group: Herder Group (one group in *Erdene Soum*)

Implementation Agency: *Erdene Soum* Government, Herder Group

1-1 Background of the Project

Herder group can sell dairy products such as camel milk and others by introducing refrigerator and freezer which are provided on loan by the *Soum* government. Then, the group can manage milk collection, sales and shipments stably throughout the year because it is possible to keep the products fresh even in summer season which normally has no shipping because of the difficulty of milk storage. Moreover, they can expand their sales market not only to *Soum* Center but *Aimag* Centre (*Sainshand*) or *Zamiin Uud*. Therefore, it is possible to improve and stabilize their livelihood through this project.

1-2 Narrative Summary of the Project

(1) Purpose

- 1) Project Purpose: Shipment & sale system of dairy products throughout a year is established
- 2) Overall Goal: Cash income of herder increases.

(2) Outputs

- 1) Production of dairy products during summer season increases
- 2) Sales of dairy products increases
- 3) Management is stabilized

(3) Inputs
Japan:
Study Team, Refrigerator, Freezer, non-electric refrigerator, Containers for transportation
Soum Government:
Soum Governor, Bag Governor, Agricultural Officer
Herder Group:
Herder group member, Milk, Equipment Cost (Tg 551,000; will be refunded to the "Soum Development Fund"),
Working Capital, Shipping cost

2. Results of Evaluation

2-1. Achievement of the Project

(1) Project Purpose: Shipment & sale system of dairy products throughout a year is established

Herder group gain income from the shipment in summer. But, because of unfavorable pasture condition caused by the shortage of rainfall in summer 2005, they were forced to move (*Otor*) far from the consumption area. Therefore, milk production and shipment could not be achieved as planned.

However, shipment was executed by the group even though its volume was small and they realized how to ship by train also. To conclude, shipping and sales system was almost established by using the equipment which was provided by the loan.

(2) Outputs

Output1) Production of dairy products during summer season increases

Shipping could not be executed as planned because of unfavorable pasture conditions caused by the drought in the summer. However, the shipment in the summer was executed continuously (in June, July and September but excluding August) even though the volume was small.

Output2) Sales of dairy products increases

It was difficult and not achieved to increase milk production and shipment as planned since pasture conditions were not favorable because of the drought.

Output3) Management is stabilized

It is premature to judge this item at the present time. If shipment is executed continuously in the future, it is highly possible to get gains although it will be influenced by the external condition such as a pasture conditions. Expansion of sales channel in summer season was realized through the shipment to *Zamiin Uud* by train.

2-2. Results of Evaluation

(1) Relevance

The purpose of this project is creation of herder's third resource of cash income by strengthening annual dairy products supply system through the support from the *Soum Development Fund*. This project can be a model for the improvement of rural livestock farming by the local government (*Soum government*). Therefore, it is judged that the relevance of this project is high.

Moreover, this project aims to ship dairy products in summer season for realization of annual shipping. "Improvement of technique regard to storage, transport and processing of livestock raw materials" is mentioned in "National Food and Agricultural Policy (2003)" and this project supports it. Furthermore, this project supports "White Revolution" in the "Integrated Program on Agriculture" which was approved by *Erdene Soum Council* in 2002.

(2) Effectiveness

Pasture condition is unfavorable by the drought in summer 2005 and herders were forced to migrate (*Otor*) far from the consumption center. Therefore, shipments and sales of the dairy products were not able to achieve targets according to schedule because of this external condition.

However, it is possible that "Annual shipments system" is developed when an external condition does not influence it, because shipments in the summer were achieved although it's the volume was small.

(3) Efficiency

Erdene Soum government held meetings actively with the herder group. And they made the repayment schedule for herders and monitoring activity of the herder group. This active attitude of *Erdene Soum* government is wonderful from the viewpoint of the sustainability of the project. As all input equipment was installed on schedule, its timing and quantity were suitable. But non-electric refrigerator did not contribute to the achievement of the outputs because the temperature in the refrigerator did not fall low enough and it was not used by the herder group.

(4) Impact

The participant group is satisfied that cash income opportunity and cash income were increased and it is deemed worthy. Moreover, the consumer's opinion about the quality of the products was very good. Supply of the camel milk by this group has responded to the high demand in consuming places, such as *Soum* Centre, and the herder group became the precious supplier of the camel milk. Moreover, another dairy products shipment and sale project is requested to the *Dornogobi Aimag* government, this project motivated by another herder group.

(5) Sustainability

The group works actively already. There is no obstruction for sustainability of the group because they can get stable income provided there are no negative external conditions such as drought and *Dzud*. For the development of rural livestock farming as a whole, it is required for *Soum* government to organize another group and to provide them a new loan based on the repayment from the first group.

2-3. Factors Promoting Sustainability and Impact

- Now, the participant group can record their activity exactly due to the project's influence. The elementary knowledge about management and accounting has been mastered by the group and they can make the records used for the basis of financial calculation. Therefore, they can analyze their operation and contrive a plan to gain further benefits.
- The sense of responsibility of the group is strong and highly motivated also to make repayments..

2-4. Factors Inhibiting Sustainability and Impact

- Shipments and sales as planned were not achieved due to the influence of external conditions.
- Non-electronic refrigerator to realize cool storage technique in summer season at the *Ger* did not function. Therefore, the group could not store their dairy products at the *Ger* and was forced to go and return between their *Ger* and consuming place. Further testing is required next summer although heat insulation sheet cover was provided.

2-5. Conclusion

Since some positive results were attained effectively with small inputs, the efficiency of this project and effectiveness are high. Moreover, wide range of impact can be expected because it is possible to improve the income of herder.

2-6. Recommendation

It is recommended that Central Government allocates the budget for "*Soum* Development Fund" steadily and it is proposed to develop livestock farming in rural area by providing a loan based on the fund like this pilot project.

2-7. Lesson Learned

- Loan through the "*Soum* Development Fund" is effective for promoting the livestock farming in rural area.
- In order to develop milk and dairy products shipments and sales system, the organized activity by herder group is effective.
- It turned out that steady instruction is needed for the utilization of non-electric refrigerator and it is required for the manufacturer to develop and distribute a user manual.

2-8. Follow-up Situation

- Repayment from herder group was executed almost as planned until now. It is required for the *Erdene Soum* government to monitor it continuously.
- *Erdene Soum* government should plan the next loan based on the repayment from first group, and then select a candidate and organize a new herder group.
- The installed non-electric refrigerator does not function. Therefore, it is required for MOPI, which is a non-profit organization and also manufacturer of the non-electric refrigerator, to fix the trouble.

4.7.5 EVALUATION OF WOOL PROCESSING AND PRODUCTS SALES PROJECT

<p>1. Outline of the Project</p> <p>* Target area: <i>Erdene Soum, Ulaanbadrakh Soum, Khuvsgul Soum</i> * Target Group: Resident Group of Each <i>Soum</i> Centre * Implementation Agency: Each <i>Soum</i> Government, Resident Group</p>
<p>1-1 Background of the Project</p> <p>It is possible to promote livestock products sale and wool processing business through implementation of concessional loan for promotion of revenue opportunity creation such as livestock raw materials processing (but excluding livestock farming) ,and so on, as well as implementation of training on wool stock and processing by herder. This makes it possible to increase cash income of project targeted herder group and to use effectively wool that is used for almost totally used for self-consumption at present in <i>Soum</i> (production of felt products by simple processing technique) and to contribute to stabilization of herder household economy through increase of cash income opportunity in <i>Soum</i>.</p>
<p>1-2 Narrative Summary of the Project</p> <p>(1) Purpose</p> <p>1)Project Purpose: Small-scale industry (wool processing) can be established by providing a concessional loan. 2)Overall Goal: Cash income of <i>Soum</i> residents increases.</p> <p>(2)Outputs</p> <p>1) Wool processing is started 2) Wool processing products can be sold continuously</p> <p>(3) Inputs</p> <p>Japan: Study Team, Equipment and machines for wool processing (JPY 1.7 Million), Study tour (JPY 75,000)</p> <p><i>Soum</i> Government: <i>Soum</i> governor, <i>Bag</i> Governor, Agricultural Officer, Manager of <i>Soum</i> Development Fund, Factory (land and facilities, in case of <i>Erdene</i> and <i>Khuvsgul Soum</i>)</p> <p>Herder Group: Herders group member, Raw materials, Factory (land and facilities: in case of <i>Ulaanbadrakh</i> Group), Operation cost, A part of the initial investment</p>
<p>2. Results of Evaluation</p> <p>2-1. Achievement of the Project</p> <p>(1) Project Purpose</p> <p>It can be judged that purpose was achieved in a way, based on the fact that small scale wool processing factories were established and its production and sales commenced in each targeted <i>Soum</i> by implementation of concessional loan. Each group executed the first repayment. It is necessary for each group to continue their business to further spread effect to neighboring herders to achieve the Overall Goal.</p> <p>(2) Outputs</p> <p>Output1) Production of wool processed goods commenced.</p> <p>This output was achieved because all three groups started production. It is necessary to plan to improve further the quality of the products and expand production and sales through further experience. Monitoring is also required from here on.</p> <p>Output2) Sale of wool processed goods is continuing.</p> <p>Although production started, there is the future challenge to increase benefit and to manage in a sustainable way while repaying money to <i>Soum</i> development fund. There is a high possibility to continue sales through reviewing repayment plan. Further monitoring is necessary.</p>

2-2. Summary of Results of Evaluation

(1) Relevance

The project aims to create employment in *Soum*, to increase income opportunity of herders who supply raw materials, and contribute to household economy, through promoting small scale wool processing business in *Soum* by using concessional loan of the *Soum* Development Fund.

Since there are few opportunities to get cash income for the herders and residents in *Soum* in rural area, it can be said that there is a high expectation to create cash income opportunity utilizing present resources. In Mongolian PRSP (2003), measures against poverty and unemployment, and improvement in the living conditions are prioritized tasks, which this project met.

(2) Effectiveness

Since employment creation for *Soum* residents and economic effect to the neighboring herders who supply raw materials are expected, this project is effective as a measure for the promotion of the local development and livestock farming in rural area.

As for Output1 of "Production of wool processed goods commenced," and Output2 of "Sale of wool processed goods is continuing," production started and sales continued; however, the amount of the production and the sales were far below the expectations. Consequently there was no enough benefit, and then the original repayment plan was reviewed. To assess achievement of Project Purpose of "Small-scale industry (wool processing) can be established by providing a concessional loan." depends on correspondence of *Soum* government and resident group to the revised repayment plan, and successive monitoring is necessary.

The project was planned under conditions of interest-free, one year no-charge, repayment period of 5 to 7 years, and 50% to 80% repayment for the initial cost. However, these three groups couldn't achieve the expected production and sale in spite of guide of management improvement in the past. Therefore they couldn't achieve the expected benefit and were compelled to review repayment conditions. As a result of the review, long repayment period of 10 to 20 years was set, so long-term correspondence of *Soum* government that manages repayment is required.

(3) Efficiency

As for input quality and timing, it can be judged that these were appropriate, except the fact that input of winding machine was delayed. However, evaluation about input quantity needs more consideration.

As for the following equipment and machines, it can be judged that necessity of input from the beginning of the project was low, because the monitoring result showed low frequency in use. This input made their repayment amount increased, and repayment plan was compelled to be reviewed.

Machines of Low Frequency Use in each Wool Processing Group

	<i>Enkhtuya</i> Group (Handicrafts)	<i>Bayantsagaan</i> Group (Handicrafts)	<i>Munkhchimeg</i> Group (Felt products)
Machine of low frequency in use	winding machine, Wooden form (for slipper, and hat), wool combing machine (comb)	Cleaning machine	Felt shoes producing machine
Reasons	As for winding machine, only one bobbin was packed at first against the required three. As for the other machines, the original members dropped out, consequently input quantity became excessive.	Careful manual works rather than machine is prioritized due to worse wool quality. Also it was not used due to the reasons such as breakdown, noise, dust, heavy handling operation, and so on.	Ger felt sale is in good demand, so they can't allocate manpower and time to the felt shoes production.

(4) Impact (prediction)

The project provides new employment opportunity in *Soum* and contributes to improvement of *Soum* residents livelihood. The fact that wool was procured by not only herders of the project targeted *Soum* but also herders in the neighboring *Soum* was confirmed. If each group's wool processing and products sale activity continues in the future, it is expected to increase cash income of the neighboring herders as well as the participating residents group. Due to big impact, it can be thought that it contributes to activation of the whole local economy.

(5) Sustainability (prediction)

Sale of the felt production group is in good demand, if production continues, considerable revenue from the sales is expected, and therefore, its sustainability is high. On the other hand, as for two groups of handicrafts, sales amount is low at present, so it is required to make an effort to increase sales seeking expansion of current sales channel, producing products corresponding to market needs, and developing new sales channels.

2-3. Factors Promoting Sustainability and Impact

Felt production is in good demand and the sales is also favorable. And they themselves are developing and implementing sales system that they receive raw materials from herders and charge only processing fee for sale, which produced a good reaction because herders can procure *Ger* felt at lower price.

2-4. Factors Inhibiting Sustainability and Impact

(1) Factors concerning Planning

Sale and repayment plan was compelled to big review. There are two reasons. One is increase of repayment amount brought by excessive input. The other is low profitability brought by bad sales.

(2) Factors concerning the Implementation Process

Although it is not easy for the handicraft sales group to improve bad sales and increase its sales, it is necessary for each group not to neglect their effort and to continue their works. In addition, although they are supposed to get support such as advice from *Soum* government, *Soum* government did not fulfill its duty.

2-5. Conclusion

Wool processing and products sales have begun at each *Soum* by using concessional loan applied *Soum* Development Fund and new employment opportunity and income opportunity was created. In addition, a new market that neighboring herders can sell wool was created; this became the project for which impact is large as livestock farming development in rural area. It is necessary to continue each project in the future and to ensure its output. To that end, *Soum* government 's monitoring and positive support to each group activity is required.

2-6. Recommendation

- It is necessary for *Soum* government to organize and develop herders /residents group that implements wool processing and products sales and to support the project.
- Human resources development is important as well as providing the loan. It is also important to enrich technical training before starting business rather than the training adopted in this Pilot project and to make group acquire sufficient technique and knowledge. It is believed that training cost can be paid by the participants and it can be included in the loan. (Assumed training place: Technique training course held by NGO, and training at the advanced case, and so on)
- As for the initially invested equipment and materials, at first resident/herder group should receive sufficient technical training and then they can propose necessary equipment and materials selection under their responsibility.
- In order to give the group corporate status such as *Khorshoo* and to ensure organization activity, preferential tax treatment for starting livestock farming related business by herder/resident should be considered. And special treatment for minimum wages (payment corresponding to sales is admired without regard for current Tg 42,500 /man/month) is considered to be necessary because it is assumed that even periodic wages cannot paid until management stabilizes.
- In order to increase wool production quality in rural area in the future, it is essential to increase raw quality as well as processing technique. To that end, it is necessary to introduce and expand raw wool grading system to reflect difference of raw quality into the prices in rural area. It is also necessary to develop and expand superior kind of wool suitable to the Gobi region.

2-7. Lesson Learned

- It is better that initial investment (loan amount) is targeted at required minimum if possible; after that, group activity becomes financially stable, and the group itself will invest step by step.
- Human resources development for technique acquirement is essential. Training on technique and management and organization operation is most important.

2-8. Follow-up Situation

- It is required that *Soum* government get positively involved with group activity and address the issues with the group as a part of *Soum* development in the future.
- *Soum* government is required to monitor group repayment to *Soum* Development Fund based on the altered agreement, to give group necessary advice, and to support them.

4.7.6 EVALUATION OF TRADITIONAL WELL CAMPAIGN PROJECT

<p>1. Outline of the Project</p> <p>* Target area: <i>Erdene Soum, Ulaanbadrakh Soum, Khuvs gul Soum</i> * Target Group: Herder Group * Implementation Agency: <i>Soum Government, Herder Group</i></p>
<p>1-1 Background of the Project</p> <p>The Traditional Well is the main water source to maintain the livestock farming system in the region because it is free of operation cost. However, they have been constructed by experts during the socialist era and construction skill is decreasing in herders. Therefore, it was assumed that the construction of Traditional Well would be developed if <i>Soum</i> government, local administration, could support herders to learn necessary skills or to buy equipment/materials. It also can be reflected in Traditional Wells campaign by Ministry of Food and Agriculture, if a clear strategy to develop the Traditional Well construction will be clarified in the project.</p>
<p>1-2 Narrative Summary of the Project</p> <p>(1) Purpose</p> <p>1) Project Purpose: <i>Soum</i> government has the capacity of promoting Traditional Well construction 2) Overall Goal: Traditional Well constructed mainly by herders increases without leading to the devastation of the pasture around the well. 3) Super Goal: Overgrazing is alleviated</p> <p>(2) Outputs</p> <p>1) <i>Soum</i> government can operate and maintain the equipment for Traditional Well construction 2) <i>Soum</i> government can instruct Traditional Well construction 3) <i>Soum</i> government can instruct pasture utilization around Traditional Well</p> <p>(3) Inputs</p> <p>Japan: Study Team, Traditional Well construction equipment and materials for lending (JPY 1.6 Million including for training materials), Textbook for Traditional Well construction</p> <p><i>Soum</i> Government: <i>Soum</i> Governor, <i>Bag</i> Governor, Agricultural Officer, Chairperson of <i>Soum</i> parliament, Property manager, Fund manager, Store house for construction equipments and materials.</p> <p>Herder Group: Herder Group member, Workforce for well construction, Construction materials (wood and cement)</p>
<p>2. Results of Evaluation</p> <p>2-1. Achievement of the Project</p> <p>(1) Project Purpose</p> <p>Number of Traditional Wells was increased in each <i>Soum</i>. However, the herder still thinks of the well as public property, and has resistance in construction/ rehabilitation by an individual. It is thought that Relevance and Effectiveness of the approach to pay for lending of equipment is low even though Relevance and Effectiveness of the project itself is high. Therefore, a drastic review of the plan is necessary such as that Traditional Well development will be treated as public utility of the <i>Soum</i> governments and it is not relying on an individual herder.</p> <p>(2) Outputs</p> <p>Output1) <i>Soum</i> government can operate and maintain the equipment for Traditional Well construction</p> <p>The equipment was not managed appropriately. The management by government of <i>Erdene Soum</i> and <i>Ulaanbadrakh Soum</i> were comparatively good, although it was bad at <i>Khuvs gul</i>. Thorough management of equipment should be required to <i>Soum</i> government.</p> <p>Output2) <i>Soum</i> government can instruct Traditional Well construction</p> <p>The manual of Traditional Well construction was prepared in the project and <i>Soum</i> government distributed it. Also, the training for construction/ rehabilitation of Traditional Wells was carried out and <i>Soum</i> government learned basic skills. However, groups to apply for rental of well construction equipment are few.</p> <p>Output3) <i>Soum</i> government can instruct pasture utilization around Traditional Well</p> <p>In the projects, all Traditional Wells are constructed in using pasture and most of them are beside their winter / spring camp. In general, water supply capacity was increased, but Traditional Wells can be used by everybody which differs from cost-required engineering wells, so that excessive concentration of herders happened in a well in summer pasture. Hence, review of construction site is required before its execution.</p>

2-2. Results of Evaluation

(1) Relevance

The relevance of construction / rehabilitation of Traditional Well is high by government policy described in government's Food and Agriculture Policy (2003), National Water Supply Plan(1999), and Action Program of the government of Mongolia (2004-2008) etc.. Moreover, the Traditional Well construction contest was continuously held by Ministry of Food and Agriculture. Hence, it can be said that the relevance of this pilot project is also high, since the project aims to develop Traditional Well construction by herders using the prepared equipment by *Soum* government.

The Traditional Well is very attractive for herders because it is free of operation cost. Some herder groups are making Traditional Wells now, but their capacities are generally low. Construction skill is decreasing in herders since the wells have been constructed by experts during the socialist era. Thus, the project aims at extension of construction skills among herder and establishing the support system to develop Traditional Well construction in *Soum* government. It is judged that the relevance of the project is high.

(2) Effectiveness

29 Traditional Wells were constructed during the project, so that it seems the output was increased stably. Based only the number of wells, it can be thought that the effectiveness of the project is high. And, the equipment management was done properly in 2 *Soums*, but problems remain in one *Soum* where review of supporting system, equipment management, renting system, etc. is required to secure continuous Output issuing.

Although, the project approach has to be reviewed, the project was designed to support the voluntary development of Traditional Well rehabilitation/construction by herders. Therefore, it is designed into the project that the necessary equipment for well construction would be rented with some cost. However, the Traditional Well is generally regarded as a public utility in and it is used by an unspecified number of herders. Therefore, it may be the rare case that a herder rents equipment by his own budget to construct a Traditional Well, except when it is in the pasture which they are using for long time as winter/spring camp, etc.

Thus, actually 2/3 of all wells in the project were constructed when the *Soum* government asked herders and provided equipment free of charge.

Also, the effectiveness of the training is not sufficient because Output of construction training is not extended and existing condition is not improved so that the number of wells have increased but their capacity has not improved.

(3) Efficiency

JPY 1.6 Million (about USD 13,500 including training cost) was spent for the provision of Traditional Well construction/rehabilitation equipment and materials, and the project has started in May 2004. Under the project, a total of 29 Traditional Wells were developed. The breakdown is as follows: 6 wells (2 wells in each *Soum*, 2 construction and 4 rehabilitation) were developed while training, and 23 wells (4 construction and 19 rehabilitation) were developed by herders.

Actual Results of Traditional Well Development
May 2004 - November 2005

Name of <i>Soum</i>	Number of Wells (Construction Training)			Number of Wells constructed / rehabilitated by Herders group			Total
	New	Rehabilitation	Total	New	Rehabilitation	Total	
<i>Erdene</i>	0	2	2	2	7	9	11
<i>Ulaanbadrakh</i>	1	1	2	1	4	7	9
<i>Khuvsgul</i>	1	1	2	1	6	7	9
Tbtal	2	4	6	4	19	23	29

The equipment was comparatively well managed by the government of *Erdene Soum* and *Ulaanbadrakh Soum*; however, it was managed poorly at *Khuvsgul*. Moreover, some equipment was not rented. In conclusion, initial input could be reduced because the expected Output was achieved even though some equipment was unused or low-used.

(4) Impact

The necessary equipment was prepared and *Soum* government gave support for well construction to herders by lending equipment when they want it. Therefore, it became clear that the *Soum* government would support Traditional Wells construction by herders. The impact was positive to establish the system to solve the constraints in the region.

By the construction of new Traditional Wells, the water supply efficiency was increased in using pasture, fattening of livestock was improved, and wasted time to wait watering around the well became short. Therefore, it can be said that negative impacts on pasture were alleviated.

The Ministry of Food and Agriculture is preparing a Traditional Well construction manual for the Gobi region based on the manual prepared in the Project. A large positive impact is expected in the region when the manual is distributed.

(5) Sustainability

Soum government became able to support the well development with the prepared equipment. However, only some herders paid the lending cost; therefore, it is wondered how they can make the corresponding breakdown of equipment financially. This means that the project sustainability is not secured yet. However, it is expected that financing sustainability can be secured when they will use *Soum* Well Fund, established in Pasture Utilization and Well Development Project, to support the Traditional Well construction.

2-3. Factors Promoting Sustainability and Impact

The leadership of *Soum* government greatly contributed to the Output achievement. Moreover, the number of wells was increased due to their focus to rehabilitation from risky new construction.

2-4. Factors inhibiting sustainability and impact

(1) Factors concerning to Planning

Some equipment was not used among prepared equipment in the project. These equipment could have been prepared by herders so that it can be said that unnecessary input was done.

Moreover, equipment management was not sufficient; thus, the improvement was made by clarifying the responsibility person and strengthening *Soum* government management.

(2) Factors concerning to the Implementation Process

The project was designed to expect voluntary effort and cost load by herders, but the Traditional Well construction by herders was not developed. It is the custom that everyone can use Traditional Wells free of charge; in other words, herders cannot use a Traditional Well by priority and they cannot charge for its use, even if they made it. Therefore, the investigation by individual herders was for a public utility, and the construction was not developed by herders. Thus, the administration (*Soum* government) has to initiate the project in the future.

New construction wells were not increased since activities to improve the existing condition, lack of skill to identify candidate locations to make new Traditional Well, was not included in the project. The herders did not try to make a new well when the possibility to obtain water was not secured by geophysical survey or remains of an ancient well, even if they knew its possibility to obtain water by their experience.

To improve the well capacity, it is necessary to dig the well even deeper after water is coming to secure the storage capacity. The strong leadership during the construction and sufficient budget are necessary to do it. The well construction training carried out aimed to extend this idea. As a result, the capacity of some wells were not improved because the herder who paid the budget stopped works to avoid increasing the cost since water was coming. Thus, the output of training was not able to be expressed.

2-5. Conclusion

In the original design of the project, the equipment was planned to be rented. However *Soum* government decided to lend them free since it was difficult to develop well construction with payment for lending equipment, so 2/3 of total wells were constructed by this free-system. The Traditional Well construction is needed by herders and the assumption that "the Traditional Well construction will be developed if *Soum* government has necessary equipment and skills to develop them" is confirmed. However, the "pay-lending equipment" approach must be reviewed.

Moreover, a guarantee to obtain the water was necessary for new Traditional Well construction. To increase the capacity of wells, the following is necessary: strong leadership in construction works, extension of Traditional Well construction method, and reduction of work load.

2-6. Recommendation

- Drainage pump is at least necessary for construction/ rehabilitation of Traditional Wells, thus it should be prepared in each *Soum*. A manual of Traditional Well construction will be distributed to all herder households.
- The geophysical exploration to identify the candidate locations is required to develop new Traditional Well construction. In this survey, the target number should be set as "30 candidate locations for Traditional Well have to be found at unused pasture in each *Soum*" to avoid lack of candidates in the results.
- The *Soum* Well Fund should be established in every *Soum* by governmental policy, and the cost burden of Traditional Well construction /rehabilitation should be supported by them.

2-7. Lesson Learned

The new Traditional Well construction does not develop so much when it depends only herders voluntary effort. The state or *Aimag* budget is necessary to develop the construction/rehabilitation of Traditional Wells so initiative for the Traditional Well construction is by administration (*Soum* government), to purchase minimum equipment and to pay construction cost itself.

The increase of water supply capacity by new well construction is one of the most effective methods to improve pasture utilization. However, it should be given careful attention to decide the construction location in summer pasture so it can identify the users of wells so that sometime excessive concentration of herders will not occur.

2-8. Follow-up Situation

- The equipment management is not sufficient by *Soum* government, so that the monitoring by *Dornogobi Aimag* government is required regularly.
- It is important to increase the capacity of rehabilitated/constructed wells; thus the Ministry of Food and Agriculture will distribute a Traditional Well construction manual in Gobi region based on the manual prepared in the Project and extension Traditional Well construction method.
- The needs to construct Traditional Well is high among herders and they also want to be assisted in purchasing the wood materials to be used for Traditional Wells. Therefore, it is also required that the supporting activities to purchase such materials is financed by *Soum* Well Fund. Hence, it is necessary to monitor operation of *Soum* Well Fund and to continue guiding its use in the work on the Traditional Well construction.

4.8 REVIEW OF THE FEEDBACK OBTAINED FROM PILOT PROJECTS

To confirm the ability of the improvement plan of Livestock Farming System in Rural Area and to prepare more effective policy and plan, 6 Pilot projects were carried out. The obtained comments through implementation of the Pilots projects are summarized here. In addition to feedback to individual pilot projects described in earlier sections, three topics were also found to be important to feedback to the Master Plan; they are discussed below.

Table 4.8.1 Important Feedback Topics from the Pilot Project

1. Planning in terms of the sustainability of activity or project

- 1-1. Organizing herders/residents into groups is effective.
- 1-2. Beneficiary contribution and establishment of Fund is effective.
- 1-3. Caution about excessive inputs.

2. Cautions regarding rule making

- 2-1. Effective rules
- 2-2. Ineffective rules - Pasture management rules in Gobi region -

3. Capacity development of beneficiary and administration (especially *Soum* government)

- 3-1. Capacity development of administration
- 3-2. Capacity development of beneficiary (herder or resident)
- 3-3. Building the relations of trust between herder and administration. (Establishment of monitoring system by *Soum* government)

4.8.1 PLANNING IN TERMS OF THE SUSTAINABILITY OF ACTIVITY OR PROJECT

(1) Herders / Residents organization.

Effectiveness of organizing herders was thought to be doubtful in the grazing pastoral system and life style of Gobi region where pasture is used widely, because of the disadvantages that herder families are scattered over many locations and only a few families will make up a group even if the group is organized, etc.

However, it was confirmed by the Pilot project that the herder group can be organized and continue their group activities even in Gobi region. It was proven by organizing herder groups that they have potential power to think, decide and solve problems, which are difficult to handle by individual herders or residents.

Moreover, the effectiveness of organizing herders/residents to achieve project purposes and outputs was confirmed.

(2) Beneficiary Contribution and Establishment of Fund

Along with organization, the beneficiary contribution was introduced to increase sustainability of activities by heightening the ownership in the group. People understood the aim of introduction of the beneficiary contribution and accomplished full responsibility even when the contribution became a heavy burden to them. The payback was carried out even if it was not scheduled; thus, its effectiveness was confirmed.

Therefore, the principal of beneficiary contribution is applied in the Plan.

(3) Cautions about Excessive Inputs

Related with the beneficiary contribution, it may happen that the participant cannot finish making its contribution for all inputs after the beginning of the project. Therefore, the initial input by the project has to be minimized, and it is better to carry out the next necessary input by the group according to own willingness after their activities become stable and they get enough experience.

4.8.2 CAUTIONS REGARDING RULE MAKING

(1) Effective Rules

1) Fund Management Rules

Fund Management became one of the main activities in every Pilot Project. Thus, rules for fund operation were effective. Such rules functioned effectively in the Livestock Fund and *Soum* Well Fund established in "Pasture Utilization and Well Development Project"; however, *Soum* Development Fund was an existing fund and its rules did not apply to the project. The fund has to be approved by the contributing beneficiary. Proper and effective management is important in the Fund since willingness to contribute to the fund is greatly

reduced when the fund is not managed properly and it is not operated effectively. Therefore, clear decision making and operation under the certain rules are essentials to maintain the sustainability of the Fund .

However, understanding of rules by fund manager is a precondition to achieve such proper operation. The thorough understanding of rules becomes very important during succession matters such as in the change of an administration.

2) Contract between the Participants Group and the Administration (*Soum* Government)

The contract was agreed between participant groups and administration (*Soum* government). Responsibility, role allotment, and load division was clarified by the contract to avoid misunderstandings and to accept each others roles. The herder groups were not legal entities, but they were made concrete by the contract. This was an important factor to maintain the sustainability of the group.

(2) Ineffective Rules - Pasture Management Rule in Gobi Region -

There is no uniformity of pastures and their conditions are different in during a year and regionally over the Gobi region due to environmental characteristics such as harsh climate and poor pasture resources. The herders continue their traditional way of pasture use in this region by migrating to look for good pasture, paying attention to ensure that the pasture won't be degraded. The installation of codified pasture utilization rules around the well was tried but it did not succeed. Because herders could not feel the necessity and effectiveness of codified rules, they were not feasibility. Therefore, the pasture management system to collect and share information about pasture between herders and administration should be established instead of codified rules.

4.8.3 CAPACITY DEVELOPMENT OF BENEFICIARY AND ADMINISTRATION (ESPECIALLY SOUM GOVERNMENT)

(1) Capacity Development of Administration

Improvement plan of Livestock Farming System in Rural Area covers various fields. Capacity development of administration is necessary to correspond to its implementation. Also important are necessary techniques in each component, and skills to organize the participants or to progress the participatory approach to development.

On the job training during implementation of the projects is as powerful as the development method.

Moreover, training and capacity development in equipment management, strict Fund management, and Project management are required.

(2) Capacity Development of Beneficiary (Herder or Resident)

The sustainability of project activities are not secured only organizing herders/residents, even though all project activities are carried out by the organized groups. Necessary skills have to be learned by beneficiaries to ensure the sustainability of the project implementation by them. Therefore, capacity development and learning skills of beneficiaries is essential. The capacity development has to be achieved by various methods such as local training carried out by local human resources, training in developed areas, distribution of texts, etc.

(3) Building the Relations of Trust between Herder and Administration. (Establishment of Monitoring System by *Soum* government)

During project implementation, the administration has to monitor the activity in each group to understand the problems early and to provide the necessary advice and support, even though they have many limitations in terms of transportation, schedule and staff. In addition, they have to make a development model to realize sustainable development, and to use it in future development to achieve the best impact and effect.

Moreover, this will make Project management smoother because the chances of discussions with herders are increased and mutual understanding becomes deeper through the monitoring activities. The role of the *Soum* government, that has close contacts with Herders, is important; thus, the capacity development of *Soum* government is a necessity.

